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Project Magnus



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Project Magnus

Profiles

Nova's mission is to patron future world-historic individuals. In our latest research initiative, Project Magnus, we profile our top five all-time Great Man of History who achieved out-of-distribution success by building venture-backed startups.

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Steve Jobs

Profile

The man who would build the world's most valuable company was, at his origin, an unwanted baby — abandoned by his biological parents, raised by a working-class machinist in the orchards of what would become Silicon Valley, and shaped by a volatile mix of genius-level intellect, countercultural rebellion, and a desperate hunger for meaning. Steve Jobs' first twenty-one years — from his birth on February 24, 1955, through the founding of Apple Computer on April 1, 1976 [Wikipedia](#) — constitute one of the most extraordinary coming-of-age stories in American business history. Every thread of his later obsessions — design perfectionism, reality-bending salesmanship, spiritual minimalism, the marriage of technology and the liberal arts — can be traced to specific experiences, relationships, and traumas from this formative period. What follows is a meticulous reconstruction of those years.

Steven Paul Jobs entered the world in San Francisco on February 24, 1955, [Wikipedia](#) [Wikipedia](#) the biological son of two University of Wisconsin graduate students who could not keep him. [IMDb](#) His father, Abdulfattah "John" Jandali, was born in 1931 in Homs, Syria, the youngest of nine children in a wealthy Muslim household [Geneanet](#) — his father was a self-made millionaire who owned oil refineries and at one point "pretty much controlled the price of wheat in the region." [medium](#) Jandali earned his undergraduate degree at the American University of Beirut, [Fandom](#) where he was a student activist jailed for political activities, before pursuing a doctorate in political science at Wisconsin. [Geneanet](#) His mother, Joanne Carole Schieble, was a Catholic woman of Swiss and German descent from rural Wisconsin, where her father Arthur owned a mink farm near Green Bay. [Geneanet](#)

Jandali was Schieble's teaching assistant. [Adoptions With Love](#) They fell in love. In the summer of 1954, Joanne traveled with Abdulfattah to Syria, spending two months in Homs learning to cook Syrian dishes. She returned to Wisconsin pregnant. [Wikipedia](#) Arthur Schieble was dying but implacable — he threatened to disown his daughter entirely if she married a Muslim Arab. [medium](#) [Yahoo Finance](#) In a small Catholic community in 1955, abortion was not an accessible option. Joanne traveled to San Francisco, where a sympathetic physician sheltered unwed mothers, delivered their babies, and arranged closed adoptions. [medium](#) [Firstmotherforum](#)

Joanne had one absolute condition: her son must be adopted by college graduates. [Fandom](#) Everything was arranged for a lawyer and his wife. But when the baby arrived — a boy — the designated couple backed out. They had wanted a girl. [medium](#) [ResearchGate](#) As Jobs himself recounted in his famous 2005 Stanford commencement address: "So my parents, who were on a waiting list, got a call in the middle of the night asking: 'We have an unexpected baby boy; do you want him?' They said: 'Of course.'" [ResearchGate](#)

Those parents were Paul Reinhold Jobs and Clara Jobs (née Hagopian). Paul was a high-school dropout from Germantown, Wisconsin [Wikipedia](#) — the son of an alcoholic dairy farmer [medium](#) — who had joined the Coast Guard at nineteen, served on the USS General M.C. Meigs ferrying troops to Italy for General Patton, and emerged as a taut, tattooed engine mechanic with a passing resemblance to James Dean. [medium](#) Clara was an Armenian-American from New Jersey whose family had fled the Turks; she had suffered an ectopic pregnancy that left her unable to bear children. [medium](#) [Medium](#) When Joanne Schieble discovered her baby had been placed with a couple who "had not even graduated from high school," she refused to sign the adoption papers. [NPR](#) The standoff lasted weeks. [medium](#) Clara later confided to Jobs' high-school girlfriend Chrisann Brennan: "I was too frightened to love him for the first six months of his life. I was scared they were going to take him away from me." [Wikipedia](#) [Wikipedia](#) Resolution came only when Paul and Clara signed a pledge to fund a savings account for the boy's college education. [Wikipedia](#) Joanne relented. Arthur Schieble died in August 1955. Just after Christmas that year, Joanne and Jandali married [medium](#) — then had a daughter, Mona, who would become the acclaimed novelist Mona Simpson. [medium](#) [Firstmotherforum](#)

The adoption left a permanent psychological imprint. Walter Isaacson distilled the dynamic in three words: "Abandoned. Chosen. Special." [medium](#) Jobs had a vivid memory of sitting on his lawn at age six, telling a neighborhood girl he was adopted. She asked, "So does that mean your real parents didn't want you?" He ran inside crying. Paul and Clara sat him down, looked him straight in the eye, and said: "We specifically picked you out." [NPR](#) [BBC Science Focus](#) They repeated it slowly, with emphasis on every word. [medium](#) Jobs later told Isaacson: "Knowing I was adopted may have made me feel more independent, but I have never felt abandoned. I've always felt special." [Adoptions With Love](#) Friend Greg Calhoun offered a darker reading: "Steve talked to me a lot about being abandoned and the pain it caused. It made him independent." Colleague Del Yocam went further: "His desire for complete control of whatever he makes derives directly from his personality and the fact that he was abandoned at birth." [medium](#)

The family settled first in an apartment in San Francisco's Sunset District, [Medium](#) then around 1959 moved to [Wikipedia](#) 286 Diablo Avenue in Mountain View's Monta Loma neighborhood [Mountain View Voice](#) [Wikipedia](#) — a subdivision of modernist homes inspired by the designs of Joseph Eichler, featuring floor-to-ceiling glass walls, open floor plans, and radiant heating in concrete floors. [medium](#) Jobs later credited these homes with instilling his lifelong design philosophy: "Eichler did a great thing. His houses were smart and cheap and good. They brought clean design and simple taste to lower-income people..." [BBC Science Focus](#) I love it when you can bring really great design and simple capability to something that doesn't cost much. It was the original vision for Apple." [medium](#)

The Santa Clara Valley was transforming from fruit orchards into the world's technology capital. Stanford's Dean of Engineering Frederick Terman had created a 700-acre industrial park whose first tenant was Varian Associates — where Clara worked as a payroll clerk. William Shockley had moved to Mountain View in 1956 to build silicon transistors; his defecting employees founded Fairchild Semiconductor and then Intel. Hewlett-Packard employed 9,000 people. Lockheed and NASA Ames Research Center hummed nearby. Jobs recalled: "Silicon Valley for the most part at that time was still orchards — and it was really a paradise. I remember the air being crystal clear, where you could see from one end of the valley to the other." [Corvid Sketcher](#)

Paul Jobs eventually found work as a machinist at Spectra-Physics, a Mountain View laser company. [Medium](#) But his true gift was craftsmanship. He marked off a section of the garage workbench [Wikipedia](#) and told young Steve: "This is your workbench now." [NPR +2](#) The walls were festooned with photographs of cars Paul admired — their curves, chrome, and interior detailing. Father and son made weekly junkyard trips for parts, where Steve watched Paul negotiate with counter clerks who knew less about parts pricing than he did. [medium](#)

The defining lesson came while building a fence. Paul taught his son that "it was important to craft the backs of cabinets and fences properly, even though they were hidden." [NPRmedium](#) Jobs told Isaacson, fifty years later while caressing the actual stockade panels: "He loved doing things right. He even cared about the look of the parts you couldn't see." [The Daily Dad +3](#) In a 1985 Playboy interview, Jobs extended the metaphor: "When you're a carpenter making a beautiful chest of drawers, you're not going to use a piece of plywood on the back, even though it faces the wall and nobody will ever see it. You'll know it's there, so you're going to use a beautiful piece of wood on the back. For you to sleep well at night, the aesthetic, the quality, has to be carried all the way through." [The Daily Dad](#)[The Daily Dad](#) This principle would later dictate that even the circuit boards inside sealed Macintosh cases be beautiful, and that engineers' names be engraved inside each machine [AOL](#) — "real artists sign their work." [CNBC](#)

Clara taught Steve to read before kindergarten. When he was two, Paul and Clara adopted a daughter, Patricia ("Patty") Jobs. [WikipediaAdoptions With Love](#) There was also a startling early realization. Jobs recalled: "When I realized that I was smarter than my parents, I felt tremendous shame for having thought that. I will never forget that moment." His parents understood. They responded not with insecurity but with fierce advocacy.

At Monta Loma Elementary School, four blocks from home, Jobs was bored and destructive. [Wikipedia](#) "I was pretty bored in school, and I occupied myself by getting into trouble." [PlatinummediagroupBBC Science Focus](#) With best friend Rick Ferrentino, he unleashed chaos: they fabricated posters announcing a fake "Bring Your Pet to School Day," causing pandemonium with dogs chasing cats across campus. [Harrisburg RegisterBBC Science Focus](#) They convinced classmates to reveal their bike lock combinations, then switched every lock

[HuffPost](#) — "it took until ten o'clock that night to sort out the mess." [BBC Science Focus](#) They set off an explosive under the chair of their third-grade teacher, Mrs. Thurman — "we gave her a nervous twitch." [Harrisburg Register +2](#) They released a snake in the classroom. [BBC Science Focus](#) Jobs was sent home two or three times before finishing third grade. [Idaho-local](#) Paul defended his son to teachers: [Wikipedia](#) "Look, it's not his fault. If you can't keep him interested, it's your fault." [Medium](#)

Everything changed in fourth grade. Imogene "Teddy" Hill, whom Jobs later called "one of the saints of my life," [Innova Design Group](#) recognized his situation immediately and bribed him to learn — offering giant lollipops and \$5 bills [Idaho-local](#) from her own pocket if he completed math workbooks. [Popturf](#) He handed the first one back within two days. [Idaho-local](#) "After a few months, I no longer needed the bribes. I just wanted to learn and to please her." [CBS News](#)[Medium](#) She had him tested; he scored at the high school sophomore level. [Intelligence and IQ](#) The school proposed skipping him ahead two full grades; his parents agreed to one. [Intelligence and IQ +2](#) Hill also saw Jobs' persuasive power — she kept a "Hawaii Day" class photo in which Jobs, who hadn't followed instructions, appears front and center wearing a Hawaiian shirt he had "literally been able to talk off another kid's back."

Skipping fifth grade sent him to Crittenden Middle School in Mountain View [Wikipedia](#)[Platinummediagroup](#) — a rough institution plagued by ethnic gangs, where knives appeared regularly and a group of students was jailed for gang rape. Jobs was bullied mercilessly. In the middle of seventh grade, he delivered an ultimatum to his parents: put him in a different school, or he would quit going entirely. Paul and Clara spent their entire savings to buy a three-bedroom ranch house [Encyclopedia.com](#) at 2066 Crist Drive in Los Altos — in the better Cupertino school district. [Wikipedia +2](#) That house would become the most famous garage in technology history.

At Cupertino Junior High, his first friend was Bill Fernandez, a fellow electronics obsessive. [RachelFandom](#) Fernandez later explained: "Neither of us wanted to play the social games that you needed to play to be accepted into any of the numerous cliques, so we eventually gravitated towards each other." [Medium](#) The neighborhood was even more saturated with engineers. A neighbor named Larry Lang put out a carbon microphone, battery, and speaker on his driveway [BBC Science Focus](#) to attract curious kids. [BBC Science Focus](#) Lang introduced Jobs to Heathkits [BBC Science Focus](#) — detailed DIY electronics kits [Idaho-local](#) — and got him into the HP Explorers Club, [Medium](#) where students met in HP's cafeteria to hear engineers discuss lasers, holography, and LEDs. [Adoptions With Love](#) It was there that Jobs first saw a computer [BBC Science Focus](#) — the HP 9100A desktop. [Medium](#) "I fell in love with it." [Adoptions With Love](#)

Then came the phone call that exemplified everything about young Steve Jobs. Needing parts for a frequency counter he was building, the twelve-year-old [BBC Science Focus](#) looked up Bill Hewlett — co-founder of Hewlett-Packard — in the Palo Alto phone book and called him at home. [NextSharkWikipedia](#) Hewlett chatted with the boy for twenty minutes, gave him the parts, and arranged a summer job [Platinummediagroup +2](#) on HP's assembly line. [Finviz +2](#) Jobs reflected years later: "Most people never pick up the phone and call. Most people never ask. And that's what separates sometimes the people that do things from the people that just dream about them." [Yahoo FinanceBenzinga](#)

Jobs entered Homestead High School in Cupertino [Fandom](#) in late 1968, [WikipediaMoofLife](#) taking John McCollum's electronics class [Fandom](#) — a retired Navy pilot [EE Times](#) who stocked every workbench with oscilloscopes and scavenged equipment. But Jobs had grown his hair long and was drifting toward the counterculture. [Fandom](#) By his sophomore year he was reading Shakespeare and Plato alongside electronics manuals, listening obsessively to Bob Dylan and the Beatles, and experimenting with marijuana (at fifteen) and then LSD (by his senior year). He recalled consuming acid in a wheat field outside Sunnyvale and experiencing "the most wonderful feeling of my life up to that point." [Fandom](#) He would later call his LSD experiences "one of the two or three most important things I have done in my life." [WikipediaCBS News](#) His Lutheran faith ended at thirteen after seeing starving children on the cover of Life magazine and finding his pastor's answers about God unsatisfying. A classmate captured the paradox: "He was smart enough to be a nerd, but wasn't nerdy. And he was too intellectual for the hippies, who just wanted to get wasted all the time. He was kind of an outsider." [Fandom](#)

In 1971, Bill Fernandez introduced Jobs to the person who would change his life. [Fandom +2](#) Stephen Wozniak — born August 11, 1950, in San Jose, [Wikipedia](#) the son of a Lockheed electrical engineer [WikipediaY Combinator](#) — had graduated from Homestead in 1968 and was five years Jobs' senior. Fernandez had known Wozniak since childhood; the Wozniak family lived across the street. [Yahoo!](#) Fernandez recalled the introduction: "Woz was out on the street washing his car... I thought to myself, 'Well, here are two electronics buddies. They might be interested in meeting each other.'" [CNBC](#) Jobs was fourteen, Wozniak nineteen. The bond was immediate — over electronics, Bob Dylan bootlegs, and pranks. [Shortform](#) Jobs later said: "Woz was the first person I'd met who knew more electronics than I did." [TOM READS](#) Jobs was more socially mature, Wozniak more technically brilliant: "I was a little more mature than my years, and he was a little less mature than his, so it evened out." [CNN](#)

Together they became legendary pranksters. They wired a giant cloth banner with an extended middle finger for the Class of '72 graduation ceremony [Mental Floss](#) (it was discovered before full unveiling). They built pocket TV jammers. Jobs formed the "Buck Fry Club" — a profane joke on the principal's name [Szmdata](#) — which hoisted a Volkswagen Beetle onto the school roof. [Outontrip](#) But the prank that mattered most was the blue box.

In the fall of 1971, Wozniak read Ron Rosenbaum's article "Secrets of the Little Blue Box" [CBS News](#) in [Esquire](#), [Fandom](#) describing how phone phreaks used audio tones to make free long-distance calls. [Slate](#) He called Jobs immediately. [Cybersecurity Ventures](#) They drove to the Stanford Linear Accelerator Center, sneaked into the library, and found an AT&T technical journal confirming the frequencies. [CBS News](#) [Mac History](#) Wozniak's goosebumps were electric: "We kept saying things like 'Oh, shit!' and 'Wow, this thing is for real!'" [Bonhams](#) Wozniak then built the first digital blue box ever created — far more precise than the analog versions used by famous phreaks [Cybersecurity Ventures](#) like John Draper ("Captain Crunch"). [Bonhams](#) Their hacker names: Wozniak was "Berkeley Blue," Jobs was "Oaf Tobar." [Slate](#)

They used the device to call Vatican City, with Wozniak impersonating Henry Kissinger and requesting an audience with [National Catholic Reporter](#) Pope Paul VI. They actually got through several levels of the hierarchy — cardinals were awakened — before bursting into laughter. [Mac History](#) Jobs, the natural entrepreneur, decided to sell the boxes. [Fandom](#) [Shortform](#) They manufactured roughly 100 units at \$40 in parts each and sold them for \$150, [Chaintech](#) primarily to Berkeley dorm students, earning approximately \$6,000. [Wikipedia](#) They were once robbed at gunpoint. Jobs later delivered what became one of his most famous reflections: "If it hadn't been for the Blue Boxes, there would have been no Apple. I'm 100% sure of that." [Boing Boing](#) [+2](#) The boxes taught them they could "solve technical problems and actually put something into production" [Cult of Mac](#) [+2](#) — and gave them "the sense of magic that we could influence the world."

In early 1972, Jobs met Chrisann Brennan, [allaboutstevejobs](#) a fellow Homestead student [Wikipedia](#) drawn to art and the counterculture. They became high-school sweethearts, [Time](#) bonding over Bob Dylan lyrics and an underground film project. He graduated from Homestead with the Class of 1972.

Jobs insisted — against all financial logic — on attending Reed College in Portland, Oregon, one of the most expensive schools in the country. His working-class parents could barely afford it, but they had made a promise. [New World Encyclopedia](#) [Wattpad](#) Reed told incoming freshmen: "You're here to measure your mind against the person sitting next to you, and the greatest minds who ever lived." [The Hollywood Reporter](#) Jobs enrolled in fall 1972. [Thrive Global](#) [+2](#)

He lasted one semester. From the Stanford speech: "After six months, I couldn't see the value in it. I had no idea what I wanted to do with my life and no idea how college was going to help me figure it out. And here I was spending all of the money my parents had saved their entire life. So I decided to drop out and trust that it would all work out OK." [Wattpad](#) [ResearchGate](#) What followed was anything but romantic. He slept on the floors of friends' dorm rooms, returned Coke bottles for 5-cent deposits to buy food, and walked seven miles across Portland every

Sunday night for one good meal at the Hare Krishna temple. [WattpadResearchGate](#) "I loved it," he said.

He stayed at Reed for roughly eighteen additional months as a drop-in, auditing whatever fascinated him. The most consequential choice was a calligraphy class taught by Robert Palladino — a former Trappist monk who had spent nearly two decades in a silent New Mexico monastery, honing the art of hand-lettering. Palladino had replaced the legendary Lloyd Reynolds as head of Reed's calligraphy program [The Last Word On Nothing](#) in 1969. [Reed College](#) [Reed College](#) Jobs learned about serif and sans-serif typefaces, the varying space between letter combinations, and "what makes great typography great." He called it "beautiful, historical, artistically subtle in a way that science can't capture." [Reed College +2](#) A decade later, that single audited class became the reason the Macintosh was the first computer with beautiful typography [Wordpress](#) — and, Jobs argued, the reason every computer since has had it. [Wattpad](#) Palladino recalled being surprised that other students "detected greatness even then" in the scruffy dropout. [Calligraphy-museum](#) He never owned a computer himself. [Wikipedia](#)

At Reed, Jobs also fell under the spell of Robert Friedland — a charismatic figure who had been arrested by the FBI in 1970 for possessing roughly \$125,000 worth of LSD, served two years in federal prison, then enrolled at Reed and won the student body presidency. [Capitalistexploits](#) Friedland managed his uncle's [Capitalistexploits](#) 220-acre apple orchard south of Portland, which he had converted into a commune called All One Farm — run as an ashram with mandatory meditation, chanting, and farm work. [Capitalistexploits](#) Jobs spent weekends there, lived in a "renovated chicken coop," and pruned Gravenstein apple trees. Daniel Kottke, Jobs' closest Reed friend, said Friedland was "charismatic, a bit of a con man and could bend situations to his very strong will. He was mercurial, sure of himself, a little dictatorial. Steve admired that, and he became more like that after spending time with Robert." [Cult of Mac](#) Many credit Friedland with teaching Jobs the "reality distortion field" [Neatorama](#) — the term Bud Tribble would coin at Apple in 1981, referencing Star Trek aliens who created virtual realities through mental force.

Jobs devoured spiritual texts: *Be Here Now* by Ram Dass ("it was profound — it transformed me and many of my friends"), [FS Blog](#) *Autobiography of a Yogi* by Paramahansa Yogananda (which he reread annually for the rest of his life [HuffPost](#) — 500 copies were distributed at his memorial service), [Northshoredailypost](#) *Diet for a Small Planet* ("that's when I swore off meat pretty much for good"), *Zen Mind, Beginner's Mind* by Shunryu Suzuki, [HuffPost](#) and Arnold Ehret's *Mucusless Diet Healing System*, [HuffPost](#) which launched him into increasingly extreme dietary practices.

In February 1974, Jobs saw a help-wanted ad for Atari that said "Have fun, make money." He walked into the lobby in sandals with disheveled hair and told the personnel director he wouldn't leave until they gave him a job. [Wikipedia](#) Al Alcorn, Atari's chief engineer, was summoned:

"We've got a hippie kid in the lobby. He says he's not going to leave until we hire him. Should we call the cops or let him in? I said bring him on in!" [Doubangamedeveloper](#) Alcorn hired Jobs as employee #40 at \$5 an hour as a technician, [The Dot Eaters](#) despite his lack of engineering credentials. [Douban](#)

The problems were immediate. Jobs believed his fruitarian diet eliminated the need for showers or deodorant [Wikipedia](#) — "a flawed theory," Isaacson noted drily. Engineer Don Lang complained: "This guy's a goddamn hippie with b.o. Why did you do this to me? And he's impossible to deal with." [Douban](#) Atari co-founder Nolan Bushnell — another charismatic showman who became a role model — solved it elegantly: "Steve was prickly, but I kind of liked him. So I asked him to go on the night shift." [Douban](#) Jobs became Atari's sole night-shift engineer, regularly inviting Wozniak in [Game Developer](#) for marathon gaming sessions.

After five months, Jobs told Alcorn he was quitting to go to India [Game Developer](#) to "find my guru." Alcorn had a practical counteroffer: Atari's German distributors needed help with incompatible power supplies. [Game Developer](#) He'd buy Jobs a one-way ticket to Germany if he fixed the problem first. [Game Developer](#) Jobs agreed, horrified the Germans with his appearance and manners, [Game Developer](#) then continued alone to India. Daniel Kottke joined him there. Their primary goal was to visit Neem Karoli Baba at his Kainchi Dham ashram in the Kumaon Hills [Ananda](#) — but the guru had died on September 11, 1973. The ashram was nearly deserted. [WikipediaMedium](#)

They spent roughly seven months trekking through rural India [WikipediaNew World Encyclopedia](#) — sleeping in abandoned buildings, [Silence of Sai](#) contracting dysentery, picking up lice and scabies. Jobs found a copy of Autobiography of a Yogi at a guesthouse and read it repeatedly while recovering. [Thrive Global](#) A laughing Hindu holy man shaved his head with a straight razor. The trip's central lesson was about the limits of seeking: "We weren't going to find a place where we could go for a month to become enlightened." [Ananda](#) The real insight was about intuition over intellect: "The people in the Indian countryside don't use their intellect like we do, they use their intuition instead... Intuition is a very powerful thing, more powerful than intellect, in my opinion." He returned to California with a shaved head and saffron robes, [WikipediaNew World Encyclopedia](#) bringing Al Alcorn a copy of Be Here Now as a gift.

Back at Atari in early 1975, Jobs was assigned the Breakout project [Wikipedia](#) — a paddle game no one else wanted to design. [Wordpress](#) Bushnell offered [Wikipedia](#) a base fee of \$750 [The Dot Eaters](#) plus a bonus of \$100 for every chip eliminated [Wikipedia](#) below the standard count. [Wikipedia](#) Jobs enlisted Wozniak, promising to split the payment evenly, [Game DeveloperWikipedia](#) and imposed a four-day deadline (he wanted to leave for an apple harvest in Oregon). Wozniak pulled four consecutive all-nighters while maintaining his HP day job, [FandomWikipedia](#) producing a breathtaking design using only 44 chips. [The Dot Eaters](#) Jobs told

Wozniak the total payout was \$700 — split \$350 each. The actual payment was \$5,750. [Game Developer](#) [Wikipedia](#) Wozniak didn't learn the truth for roughly a decade, [Game Developer](#) discovering it in a book on Atari history. "I cried," Wozniak told the BBC. "I cried quite a bit when I read that." [International Business Times](#) But he added: "The money's irrelevant. I would have done it for free. If he'd told me the truth, he'd have gotten it." [Game Developer](#)

After India, Jobs deepened his Zen practice [Wikipedia](#) at the Los Altos Zen Center, where he met Kobun Chino Otogawa [Wikipedia](#) — a young, unconventional Japanese Zen priest who had helped Shunryu Suzuki establish Tassajara, the first Zen monastery in America. [The Mercury News](#) Jobs met Kobun almost daily for meditation, [The Zen Programmer](#) and their mentor-student relationship lasted over twenty years. [Amae](#) Jobs seriously considered becoming a monk at [Wikipedia](#) Tassajara. Kobun counseled against it, reportedly telling him he could find Zen within his work — that he should dedicate himself with passion to what he loved most. [Amae](#) The advice proved decisive. Kobun later officiated Jobs' wedding to Laurene Powell and served as "Spiritual Advisor" at NeXT. [Amae](#) The Zen principles of simplicity, minimalism, and the value of empty space became foundational to everything Apple would create. [Smithsonian Magazine](#) [Inc](#)

On March 5, 1975, about thirty people gathered in Gordon French's garage in Menlo Park during a rainstorm for the first meeting of the Homebrew Computer Club. [Wikipedia](#) [History Tools](#) The January 1975 issue of Popular Electronics had featured the MITS Altair 8800 on its cover, and the personal computer revolution was stirring. Wozniak's friend Allen Baum brought him to the first meeting. [FoundSF](#) Wozniak later wrote: "After my first meeting, I started designing the computer that would later be known as the Apple I. It was that inspiring." [Arkive](#) Jobs attended some meetings but was less enthused by the technical sharing — his mind went immediately to commerce.

Wozniak was working as a calculator designer at Hewlett-Packard. [Wharton School](#) [+3](#) When MOS Technology released the 6502 processor at \$25 — versus \$175 for competing chips — Wozniak seized the opportunity. [Wikipedia](#) He designed a computer around it with a revolutionary feature: video display terminal circuitry that allowed connection to an ordinary television [RetroTechCollection](#) and keyboard, [Wharton School](#) eliminating the front-panel switches and blinking LEDs of other hobbyist machines. [Wikipedia](#) He had offered the design to HP five times. They rejected it five times. [Mental Floss](#) [Wikipedia](#) He intended to give the schematics away free at Homebrew meetings, [Wikipedia](#) embodying the club's open-sharing ethos. [Shortform](#)

Jobs saw something Wozniak didn't. He convinced his friend they should start a company. [Shortform](#) Wozniak was skeptical. [KQED](#) Jobs deployed the argument that would tip the balance: "Even if we lose money, we'll have a company." [Wikipedia](#) They needed capital. Jobs

sold his Volkswagen van; Wozniak sold his HP-65 calculator. Together they raised about \$1,300. [Wikipedia](#)

On April 1, 1976, Apple Computer Company was founded as a California business partnership. [Wikipedia](#)[Wikipedia](#) The three-page agreement was typed by the third co-founder — Ronald Wayne, a 41-year-old Atari draftsman who had met Jobs and Wozniak there. [Wikipedia](#) The split: Jobs 45%, Wozniak 45%, Wayne 10%. [Mac History](#)[TechSpot](#) (his role was to serve as a tiebreaker). Wayne designed Apple's first logo [CNBC](#) — Isaac Newton sitting under an apple tree, framed by a Wordsworth quote — and wrote the Apple I operations manual. [Wikipedia](#) Twelve days later, terrified that as the only partner with personal assets he could be wiped out by creditors, Wayne withdrew and sold his 10% stake for \$800 [Mac History](#) (he later received an additional \$1,500 to forfeit future claims). [Hypebeast](#) That stake would eventually be worth hundreds of billions of dollars. Wayne told CNN: "If I stayed at Apple I would have probably ended up the richest man in the cemetery." [Fortune](#)

The name came from Jobs' time at Friedland's commune. [Yahoo Finance](#) Wozniak recalled driving Jobs back from the airport: [Wikipedia](#) "Steve was coming back from a visit to Oregon to a place he called an 'apple orchard.' It was actually some kind of commune. Steve suggested a name — Apple Computer." [Macworld](#) Jobs explained to Isaacson: "I had just come back from the apple farm. It sounded fun, spirited, and not intimidating. Apple took the edge off the word 'computer.'" [Psychology Today](#) +3 It would also come before Atari in the phone book. [Cult of Mac](#) Wozniak immediately flagged a concern: "What about Apple Records?" — the Beatles' label. [Macworld](#) That worry spawned four decades of litigation, finally resolved in 2007. [Wikipedia](#)

The pivotal early break was Paul Terrell of the Byte Shop, [Groklopedia](#) one of the world's first computer retailers, who saw a Homebrew demonstration and ordered 50 fully assembled Apple I computers [Groklopedia](#) at \$500 each [Wikipedia](#) +2 — a \$25,000 order. Jobs used this purchase order to obtain parts on 30-day credit from Cramer Electronics, then assembled boards in his parents' garage and spare bedroom with the help of Kottke, sister Patty, and Wozniak. They delivered on time. The retail price was set at \$666.66 [Wikipedia](#)[Groklopedia](#) — Wozniak liked repeating digits, [Wikipedia](#) and it represented a one-third markup on the \$500 wholesale price. Approximately 200 Apple I units were produced in total. [Wikipedia](#)[Wikipedia](#)

Wozniak has repeatedly qualified the garage mythology. "The garage is a bit of a myth," he told Bloomberg Businessweek in 2014. "We did no designs there, no breadboarding, no prototyping, no planning of products." [International Business Times](#)[Atlas Obscura](#) Kottke confirmed he "was really the only person who worked in the garage. Woz would show up once a week with his latest [Wikipedia](#) to test it out, and Steve Jobs was on the phone a lot in the kitchen." [Wikipedia](#) The real engineering happened in Wozniak's HP cubicle at night and his Cupertino apartment.

Gizmodo But the garage is where the finished products came together — and where the myth took root.

By late 1976, Jobs was seeking serious investment. Nolan Bushnell referred him to venture capitalist Don Valentine of Sequoia Capital, who took one look and asked: "Why did you send me this renegade from the human race?" Mac History But Valentine introduced Jobs to Mike Markkula — a retired Intel marketing manager who had made millions from stock options and retired at thirty-two. Celebrity Net WorthMoney Morning Markkula invested approximately \$92,000 of his own money and secured a \$250,000 Wikipedia line of credit from Bank of America, taking a one-third ownership stake. He wrote the business plan, authored Apple's foundational "Marketing Philosophy" memo — emphasizing empathy, focus, and "impute" (the idea that people judge a product by its packaging and presentation) — and insisted Wozniak quit HP as a condition of investment. Apple Computer, Inc. was formally incorporated on January 3, 1977, and the partnership was bought out for \$5,308.96. Wozniak later said: "Steve and I get a lot of credit, but Mike Markkula was probably more responsible for our early success, and you never hear about him."

By twenty-one, every ingredient of the Steve Jobs the world would come to know was already present. The adoption wound created both his driving need for control and his conviction that he was special — chosen, not abandoned. Paul Jobs' garage taught him that craftsmanship means caring about the parts nobody sees. NPR The Eichler homes of Mountain View showed him that great design could be democratic. The calligraphy class at Reed instilled an aesthetic sensibility that no engineering program could have provided. Robert Friedland modeled the charismatic intensity that colleagues would later name the "reality distortion field." Zen Buddhism gave him the philosophical framework of radical simplicity. The blue boxes proved that two kids with \$100 in parts could control billions of dollars' worth of infrastructure Cybersecurity Ventures — teaching what Jobs called "the sense of magic that we could influence the world." And Steve Wozniak provided the engineering genius that Jobs could never have matched but instantly recognized as transformative.

What is most striking about the pre-Apple years is not any single experience but their alchemical combination. No linear path connects a Syrian political scientist's abandoned son to the founding of the most valuable company in history. The path runs instead through a machinist's garage and a monk's calligraphy studio, through an Indian ashram and an Oregon apple commune, through Atari's night shift and the Homebrew Computer Club's spirit of open sharing — which Jobs alone among the attendees saw not as an end in itself but as the seed of a commercial revolution. The dots could only be connected looking backward. Jobs spent the first twenty-one years generating them.

Elon Musk

Profile

In the summer of 1989, a seventeen-year-old with a South African accent and a knapsack full of books stepped off a plane in Montreal, Canada, clutching a list of relatives he had never met. He had about two thousand dollars in traveler's cheques, no contacts who knew he was coming, and no clear plan beyond a single, burning conviction: he needed to get to America. When he called the one relative he had an address for — a great-uncle in Montreal — the man had moved away. So Elon Musk went to a youth hostel, shared a room with five strangers, and slept on his backpack. “I was used to South Africa, where people will just rob and kill you,” he later recalled. “So I slept on my backpack until I realized that not everyone was a murderer.”^[1]

He was, at that moment, nobody at all — a skinny, awkward teenager from Pretoria who had never held a real job, whose father had told him he'd be back in three months, and whose most notable achievement to date was selling a video game to a computer magazine for five hundred dollars. But he carried with him something harder to quantify than money: a peculiar intensity of mind that had been sharpening itself, in isolation, for the better part of a decade. To understand how that mind was formed — and how it came to land in the lobby of a youth hostel in Montreal with nothing but books and bus fare — you have to go back to the beginning, to a family of adventurers, engineers, and fabulists living in the jacaranda-shaded suburbs of apartheid-era Pretoria.

The Musk story, properly told, begins not in South Africa but in the wheat fields of Saskatchewan, Canada. Elon's maternal grandfather, Joshua Norman Haldeman, was born in 1902 in Pequot Lakes, Minnesota, the son of Mennonite farmers of Swiss descent.^[2] He became a chiropractor, moved to Saskatchewan, and threw himself into fringe politics — first as a leader of the Technocracy movement (an offense for which the Royal Canadian Mounted Police arrested him in 1940), then as chairman of the Social Credit Party's national council.^[3] He ran for Parliament twice and lost both times, once to Prime Minister Mackenzie King and once to future Prime Minister John Diefenbaker.^[4] In 1950, apparently dissatisfied with the direction of Canadian society, Haldeman packed up his wife Winnifred — a dance instructor from Moose Jaw known as Wyn — and their children, disassembled his single-engine Bellanca Cruisair Senior, shipped it in crates to South Africa, and reassembled it in Pretoria.^[5]

Joshua was, by any measure, a man of extraordinary appetites. He and Wyn flew that little Bellanca across eighty countries and territories.^[6] In 1954, they made a roughly thirty-thousand-mile round trip from South Africa to Australia — possibly the longest journey ever completed by private pilots in a single-engine aircraft, navigating without GPS or modern instruments.^[7] Beginning in 1953, Joshua led twelve expeditions into the Kalahari Desert in search of a legendary lost city reported by the explorer G.A. Farini in 1885, flying at two hundred feet off the ground, Wyn beside him, whichever children were home crammed into the back. He never found it but remained convinced it existed.^[8] The Haldemans co-authored a book about their exploits titled *The Flying Haldemans: “Pity the Poor Private Pilots.”*^[9] Joshua was killed in a plane crash on January 13, 1974 — Elon was two and a half years old — when he flew into a power line while showing a friend how to fly.^[10] But throughout Elon's childhood, his

grandmother Wyn, who lived until 2012, told him stories of Joshua's adventures and showed slide after slide of those improbable journeys across the world.^[111]

Among Joshua's children was a girl named Maye, born on April 19, 1948, in Regina, Saskatchewan — a twin, one of five siblings.^[121] She was two when the family moved to Pretoria. She grew into a striking young woman who began modeling at fifteen and became a finalist in the 1969 Miss South Africa competition.^[131] She would go on to earn two master's degrees in nutrition and dietetics and build a career that, decades later, would put her on the cover of *Sports Illustrated* at seventy-four. But in the early 1970s she was a young model in Pretoria who had caught the eye of Errol Musk.

Errol Graham Musk, born May 25, 1946, was the son of Walter Henry James Musk, an English-speaking white South African who had served as a cryptographer in Egypt during the Second World War, and Cora Amelia Robinson, originally from Liverpool.^[141] Errol studied electromechanical engineering at the University of Pretoria and built a lucrative practice developing large projects — “office buildings, retail complexes, residential subdivisions, and an air force base.”^[151] He met Maye at Clapham High School in Pretoria, and according to Ashlee Vance's biography, “aggressively pursued” her.^[161] Maye's version of events, recounted in her 2019 memoir *A Woman Makes a Plan* and in a BBC interview, is considerably darker: she says she initially declined his proposal, but Errol contacted her entire family to announce she had accepted. “I got this telegram from my parents saying congratulations, the wedding arrangements are made, the invites are out and 800 people are coming,” she told the BBC. “The abuse started right away... I came back from my honeymoon bruised and pregnant.”^[171] Errol denies any physical abuse, calling the allegations “ridiculous, absurd and made up,” though he has admitted, “I screwed up the marriage, I was totally responsible.”^[181]

They married in 1970. Their first child, Elon Reeve Musk, was born on June 28, 1971, in Pretoria.^[191] He was named after his great-grandfather, John Elon Haldeman.^[201] Kimbal followed on September 20, 1972, and Tosca in 1974.^[211]

By the time the children were old enough to form memories, the family was wealthy. Errol owned two homes, a yacht, an airplane, and five luxury cars. A maid cooked dinners. Maye told *Harper's Bazaar* that Errol was “very rich.”^[221] In an interview with *Business Insider South Africa*, Errol put it more colorfully: “We had so much money we couldn't even close our safe.”^[231] But the marriage was disintegrating. Maye later wrote that “everybody I knew called him ‘the Pig’ because he treated me so badly in public.”^[241] Tosca has recalled that she and her brothers would hide and cry while Errol beat Maye, and that young Elon would pull at his father's legs.^[251] In 1979, Maye obtained a divorce.^[261]

What happened next would define Elon's childhood. At roughly nine years old, he chose to live with his father. “I felt sorry for my father,” he later explained. “He seemed very sad and lonely by himself. So I thought, ‘I can be company.’”^[271] There was also a practical lure: Errol's house had an *Encyclopædia Britannica* and a computer. Maye, suddenly a single mother with little money, could offer neither. “I didn't really understand at the time what kind of person he was,” Musk told *Rolling Stone* in 2017. “It was not a good idea.”^[281] Kimbal followed Elon to Errol's house. They would both come to regret the decision profoundly.

Errol lived in Waterkloof, a wealthy Pretoria suburb shaded by purple jacaranda blossoms in spring.¹²⁹¹ Life behind those walls bore little resemblance to life on the leafy street outside. Walter Isaacson's 2023 biography describes Errol as possessing a Jekyll-and-Hyde nature — friendly and engaging one moment, then erupting into hour-long tirades that invariably ended by telling his sons how pathetic and worthless they were.¹³⁰¹ Kimbal confirmed this, telling Isaacson that their father would “scream at them for two to three hours, calling them worthless and pathetic.”¹³¹¹ Errol himself told Isaacson he had exercised “an extremely stern streetwise autocracy” and that the boys' experiences with him would have made the notorious South African wilderness camps “quite tame.”¹³²¹ Elon, in his 2017 Rolling Stone interview, was less measured: “He was such a terrible human being. You have no idea. My dad will have a carefully thought-out plan of evil. He will plan evil.”¹³³¹

Whatever was happening at home, it was matched by what was happening at school. Elon was younger than his classmates — his June birthday fell near the enrollment cutoff, and he had started a year early — and he was small, introverted, and socially awkward in a way that drew cruelty the way a wound draws infection.¹³⁴¹ He had an unusual habit of going so deep into thought that he appeared to lose all sensory awareness. His family tried to get his attention and failed. His school's principal called his parents in and told them, bluntly, “We have reason to believe that Elon is retarded.”¹³⁵¹ Errol recalled: “I knew he wasn't retarded, but I didn't know what to say.” Doctors removed his adenoids on the theory that hearing loss was the problem. It made no difference.¹³⁶¹ “Ever since I was a kid,” Musk later explained, “if I start to think about something hard, then all of my sensory systems turn off.” His mother, Maye, learned to recognize the look: “He goes into his brain, and then you just see he is in another world. Now I just leave him be because I know he is designing a new rocket or something.”¹³⁷¹

What was he doing in that other world? Reading, mostly. “I was raised by books,” he told Rolling Stone. “Books, and then my parents.”¹³⁸¹ He consumed science fiction at a rate of up to ten hours a day — Isaac Asimov's Foundation series, J.R.R. Tolkien's Lord of the Rings, Douglas Adams's The Hitchhiker's Guide to the Galaxy.¹³⁹¹ When he exhausted the local library's shelves, he picked up the Encyclopædia Britannica and read straight through it by age nine.¹⁴⁰¹ His father would find him at parties having vanished from the room — located, eventually, in the host's library, going through their books. Errol told Forbes: “Elon has always been an introvert thinker... where a lot of people would go to a great party and have a great time and drink and talk about all sorts of things like rugby or sports, you would find Elon had found the person's library and was going through their books.”¹⁴¹¹ His mother recalled that as a five-year-old, he told another child who was afraid of the dark that darkness was “just the absence of photons in the visible wavelength, between 400–700nm.” The family took to calling him “genius boy” and directing questions to him.¹⁴²¹

At around ten, he saw a computer in an electronics store and became obsessed. He begged his father for a Commodore VIC-20, a machine with five kilobytes of memory. Errol, despite being an engineer, didn't see the point and initially refused, but the boy persisted.¹⁴³¹ The VIC-20 came with a BASIC programming workbook designed to take an adult six months to complete. Musk did it in three days without sleeping. “I just got super OCD on it and stayed up for three days with no sleep and did the entire thing,” he said. “It seemed like the most super-compelling thing I

had ever seen.”^[44] At twelve, working alone, he wrote a space-themed shooting game called Blastar — 167 lines of BASIC code in which a player controlled a spaceship, dodging alien freighters carrying hydrogen bombs. He sold the source code to a South African magazine called PC and Office Technology, which published it in its December 1984 issue, for approximately five hundred dollars.^[45]

He and Kimbal were entrepreneurial in other ways, too. They sold homemade chocolate Easter eggs door-to-door in wealthy Pretoria neighborhoods — buying materials for fifty cents and charging ten dollars per egg.^[46] They planned to open a video arcade, even leasing a building, but no adult would sign the necessary permit.^[47]

School was an ordeal. Musk attended Waterkloof House Preparatory School, then Bryanston High School in Johannesburg — a sports-mad, all-white institution where, as former student Lesley Burns described it, “there were all the jocks and the popular guys in the football team.”^[48] For a scrawny, bookish kid who would rather read science fiction than play rugby, Bryanston was hostile terrain. “Gangs would hunt me down,” Musk later said. “Literally hunt me down.”^[49] The bullies were so ruthless they beat up his best friend to discourage the boy from associating with him. “They were a bunch of f---ing psychos,” Musk recalled.^[50]

The worst incident came at Bryanston, around 1985. As Isaacson recounts it, a boy bumped into Musk during assembly one morning. Elon pushed back. Words were exchanged. At break time, the boy and his friends found Elon eating a sandwich, came up from behind, kicked him in the head, and shoved him down a flight of concrete steps. Kimbal’s account is vivid: “They sat on him and just kept beating the shit out of him and kicking him in the head. When they got finished, I couldn’t even recognize his face. It was such a swollen ball of flesh that you could barely see his eyes.”^[51] Errol Musk told BizNews that he could not recognize his own son at the hospital, and that Elon was hospitalized for approximately two weeks at the Sandton Clinic.^[52] Musk was still undergoing corrective surgery on his nose decades later.^[53] Errol’s version of what provoked the attack diverges sharply from his sons’: he told a journalist that the attacker’s father had recently committed suicide and that Elon had called the boy “stupid.” Elon and Kimbal have called this account “unhinged,” noting the attacker was later sent to juvenile detention.^[54]

What followed the beating may have been worse. Errol berated Elon for an hour at the hospital. “I had to stand for an hour as he yelled at me and called me an idiot and told me that I was just worthless,” Musk told Isaacson. Kimbal called it the worst memory of his life: “My father just lost it, went ballistic, as he often did.”^[55]

After the incident, Errol moved the boys to Pretoria Boys High School, an imposing redbrick institution founded in 1901 and modeled on English boarding schools.^[56] The school was progressive for apartheid-era South Africa: in 1981, its headteacher Malcolm Armstrong had used a legal loophole to admit the first Black pupil to a white government school in the country.^[57] Life was marginally better there. Gideon Fourie, a classmate in computer science, remembered Musk as “well liked” and “a very average personality. He wasn’t in any way like a super jock, or a super nerd, or a super punk... He had a group of friends.”^[58] One anecdote stands out: when a white student used a racial slur at lunch, Musk called him out — and was

bullied for it. A Black friend, Asher Mashudu, was killed in a car accident in 1987, and Musk was one of only a handful of white students who attended his funeral in a rural village. Mashudu's brother later said, "It was unheard of during that time."¹⁵⁹¹

By about fifteen, Musk had undergone a growth spurt, reaching roughly six feet with what Isaacson described as "a bearlike frame." He took up karate, judo, and wrestling.¹⁶⁰¹ "I realized by then that if someone bullied me, I could punch them very hard in the nose, and then they wouldn't bully me again," he said.¹⁶¹¹ Academically, he was a decent but unexceptional student, earning a 61 out of 100 in Afrikaans and a B on his senior math certification.¹⁶²¹

All through those years in Pretoria, the white suburbs existed in a kind of bubble. Jonathan Stewart, a year above Musk at Pretoria Boys, captured it: "While the country as a whole was very much in flames and in turmoil, we were blissfully very safe in our little leafy suburbs, going about our very normal life."¹⁶³¹ Errol, for his part, served on the Pretoria City Council as a representative of the anti-apartheid Progressive Party.¹⁶⁴¹ But the regime was ever-present. White South African males faced compulsory military service, which would have meant enforcing the very apartheid system Musk had been raised to reject.¹⁶⁵¹

Musk had wanted to get to America since childhood. The country of his favorite comic book heroes, the place where technologies and discoveries seemed to originate — it pulled at him with an almost gravitational force.¹⁶⁶¹ His mother's Canadian citizenship offered a path: Canadian law allowed citizenship by descent, and Canada was a far easier launching pad to the United States than South Africa.¹⁶⁷¹ At seventeen, Musk went to the Canadian consulate on his own and obtained passport application forms — not only for himself but for his mother, Kimbal, and Tosca. Not for his father.¹⁶⁸¹ While waiting for the paperwork to come through, he enrolled at the University of Pretoria for five months — a strategic move that also provided an exemption from military service.¹⁶⁹¹ The approvals came in late May 1989.¹⁷⁰¹ Errol's reaction was characteristically cutting. Elon recalled: "He said rather contentiously that I'd be back in three months, that I'm never going to make it, that I'm never going to make anything of myself. He called me an idiot all the time. That's the tip of the iceberg, by the way."¹⁷¹¹

In June 1989, just before his eighteenth birthday, Elon Musk landed in Montreal with a backpack, a list of relatives, and approximately two thousand dollars in traveler's cheques.¹⁷²¹ After a week at the youth hostel, he bought a hundred-dollar Greyhound Discovery Pass and boarded a bus heading west. The bus stopped at every hamlet and took days to cross Canada. At one stop, he got off to find lunch. The bus left without him — but with his suitcase, which contained his traveler's cheques and all his clothes. He was left standing on a platform with nothing but his knapsack of books. Getting the cheques replaced took weeks.¹⁷³¹

He headed for Saskatchewan, where his mother's people had once lived. A second cousin his age named Mark Teulon had a wheat farm near the tiny town of Waldeck, not far from Moose Jaw.¹⁷⁴¹ Elon called from the bus station: "Hey, it's Elon, your cousin from South Africa. I'm at the bus station." Teulon showed up with his father, took Elon to a Sizzler steakhouse, and brought him back to the farm.¹⁷⁵¹ For six weeks that summer, Musk cleaned grain bins, shoveled grain, tended vegetables, and helped raise a barn. He celebrated his eighteenth birthday there, with a homemade cake.¹⁷⁶¹

Then he got back on the bus and rode to Vancouver, where he moved in with his mother's half-brother.¹⁷⁷ He cut logs with a chainsaw, working as what he would call "a bonafide lumberjack."¹⁷⁸ At an employment office, he spotted a listing that paid eighteen dollars an hour — triple the going rate. The catch: it required cleaning out the boilers at a lumber mill. The job meant donning a hazmat suit and shimmying through a narrow tunnel into a chamber where wood pulp had been boiled, then shoveling out the lime that caked the walls while the residue was still steaming hot. "If the person at the end of the tunnel didn't remove the goo fast enough, you would be trapped while sweating your guts out," Musk recalled. "It was like a Dickensian steampunk nightmare filled with dark pipes and the sound of jackhammers."¹⁷⁹ Of thirty people who started the job with him, only three remained by the end of the first week. Musk was one of them.¹⁸⁰

Meanwhile, his mother Maye had decided to leave South Africa as well. She sent scouting reports from Canadian cities: Vancouver was too rainy, Montreal exciting but French-speaking. They would go to Toronto. Tosca promptly sold the family's South African house and furniture and joined her mother.¹⁸¹ In Toronto, all three crammed into a one-bedroom apartment — Tosca and Maye shared a bed; Elon slept on the couch. There was almost no money. Maye later remembered crying when she spilled a glass of milk because she could not afford to buy more.¹⁸² Maye worked at a university, a modeling agency, and as a diet consultant — "I worked every day and also four nights a week," she said.¹⁸³ Elon had no friends and no social life in Toronto. When Tosca, a saucy teenager, went out, Elon would insist on coming. She imposed a rule: "You have to stay ten feet away from me at all times." He would trail behind her and her friends, carrying a book to read whenever they entered a club.¹⁸⁴

In the fall of 1990, Musk enrolled at Queen's University in Kingston, Ontario. He had narrowed his choices to Queen's and the University of Waterloo. "Waterloo was definitely better for engineering," he admitted, "but it didn't seem great from a social standpoint. There were few girls there." He visited Queen's. "There were girls there."¹⁸⁵ It was a characteristically pragmatic calculation from a young man who, for the first time in his life, desperately wanted a social existence.

He was placed on the international floor of Victoria Hall. On the first day, he met Navaid Farooq, a student whose Pakistani father and Canadian mother had raised him in Nigeria and Switzerland. Like Elon, Farooq had made no close friends in high school. "For me and Elon," Farooq later recalled, "it was probably the first place we were socially accepted and could be ourselves."¹⁸⁶ The two became inseparable, bonding over late-night philosophical discussions about the meaning of life and marathon sessions of the strategy game *Civilization*, which had just been released. "We completely entered a zone for hours until we were exhausted," Farooq said.¹⁸⁷ After hours of playing, they would take a break for a meal, and Elon would explain the exact moment he had known he was going to win. "I am wired for war," he told Farooq.¹⁸⁸

When Kimbal arrived at Queen's — having stayed behind in Pretoria to finish high school — the brothers developed a habit of reading the newspaper, picking out the most interesting person in it, and cold-calling them. The more gregarious Kimbal took the lead. "If we were able to get through on the phone, they usually would have lunch with us," Kimbal said.¹⁸⁹ One call reached

Peter Nicholson, the executive in charge of strategic planning at Scotiabank — an engineer with a master’s in physics and a PhD in math. Their mother took them to Eaton’s department store to buy a ninety-nine-dollar suit that came with a free shirt and tie. At lunch, they discussed philosophy, physics, and the universe. Nicholson offered them summer jobs, inviting Elon onto his three-person strategic planning team.¹⁹⁰¹ At a party that summer, Musk approached Nicholson’s daughter Christie with an opening question: “Do you ever think about electric cars?” As he later acknowledged, “it was not the world’s best come-on line.”¹⁹¹¹

At the Scotiabank internship, Musk researched Latin American debt and became convinced the bank could make billions buying Brady Bonds at a discount. He called the Goldman Sachs trading desk in New York, putting on a deep voice: “Would it be possible to get five million?” He was told it would be no problem, and hung up fast. But the bank’s CEO rejected the idea as too risky. “Is this how banks think?” Musk said, astounded.¹⁹²¹ He would later recall: “All the bankers did was copy what everyone else did. If there was a giant pile of gold sitting in the middle of the room and nobody was picking it up, they wouldn’t pick it up either.”¹⁹³¹

It was also at Queen’s that Musk met a freshman named Justine Wilson, an English literature student. He appeared before her one afternoon as she was leaping up the steps to her dorm and claimed they had met at a party she knew she hadn’t attended. Years later, he would confess he had noticed her from across the common room and invented the party.¹⁹⁴¹ He asked her for ice cream. She agreed, then blew him off, leaving a note on her door. Hours later, while studying Spanish in the student center, she heard a polite cough. “Elon was smiling awkwardly, two chocolate-chip ice cream cones dripping down his hands. He’s not a man who takes no for an answer.”¹⁹⁵¹

After two years at Queen’s, Musk transferred to the University of Pennsylvania, believing that an American Ivy League degree would accelerate his path into American industry.¹⁹⁶¹ He enrolled in two programs simultaneously — a Bachelor of Science in Economics at the Wharton School and a Bachelor of Arts in Physics at the College of Arts and Sciences.¹⁹⁷¹ Physics gave him tools for thinking about energy and matter; economics gave him a lens on markets and opportunity. Somewhere during those years, he crystallized the conviction that would organize his thinking for decades. He later told the Y Combinator blog: “The five things that I thought about at the time in college, quite a long time ago, 25 years ago: making life multi-planetary, exploring the transition to sustainable energy, the internet broadly speaking, and genetics and AI.”¹⁹⁸¹

Penn was where Musk finally developed something resembling a social life — though characteristically on his own terms. As a transfer student, he was placed in a freshman dorm with restrictive rules on visitors and noise. Also placed there was another transfer: Adeo Ressi, born Adeodato Gregory Ressi di Cervia, an Italian-American from New York’s Upper West Side — tall, gregarious, and fun-loving where Musk was reserved and intense.¹⁹⁹¹ Neither liked rules, so they rented a house in a sketchy part of West Philadelphia and turned it into an unlicensed speakeasy. On weeknights, they studied. On weekends, Ressi covered the windows with trash bags to make it pitch black inside, decorated the walls with glow-in-the-dark paint, and pumped bass so loud the ground outside shook. “It was a full-out, unlicensed speakeasy,” Ressi said. “We would have as many as five hundred people. We would charge five dollars, and it would be pretty much all you could drink — beer and Jell-O shots and other things.”¹⁰⁰¹

Musk's role was operational. "Somebody had to stay sober during these parties," he explained. "I was paying my own way through college and could make an entire month's rent in one night. Adeo was in charge of doing cool shit around the house, and I would run the party."^[101] Maye Musk visited one party, discovered the chaos, and ended up working the door — "as the coat check/money taker," grabbing a pair of scissors for protection as cash piled into a shoe box.^[102] Ressi nailed Musk's desk to the wall and painted it in Day-Glo colors as installation art. Musk ripped it down, painted it black, and sat at it to study.^[103] Amid the bass and the black light, Ressi observed something in his housemate that he would remember for decades. "He enjoyed being around a party but not fully in it," Ressi said. "The only thing he binged on was video games." And: "I wish Elon knew how to be a little happier."^[104]

To reduce housing costs, Musk served as a Resident Advisor in a freshman dorm in 1994, where he met Jennifer Gwynne, another RA. She described him as "shy and quiet" and recalled that he "won her over by bringing food to her room one night."^[105] Even then, Musk talked about electric cars and alternative fuel sources.^[106] Over Christmas break in 1994, Gwynne visited Maye in Toronto, and Musk gave her a fourteen-karat gold necklace set with a small emerald that, Gwynne recalled, came from his father's collection.^[107]

That emerald opens up one of the more tangled threads in the Musk family story. In a 2018 interview with Business Insider South Africa, Errol described himself as "a half owner" of an emerald mine in Zambia, recounting that Elon and Kimbal had once walked the streets of New York with emeralds in their pockets and sold two stones to Tiffany & Co. for two thousand dollars.^[108] Walter Isaacson's 2023 biography clarified the story somewhat: in 1986, Errol had landed his twin-engine Cessna at a Zambian airstrip and, instead of accepting cash payment for the plane from a Panamanian-Italian businessman, took a share of the emerald production from three small mines the man owned. It was an informal, handshake arrangement with no paperwork, and Errol imported raw emeralds to Johannesburg to have them cut.^[109] The venture collapsed in the late 1980s when synthetic emeralds from Russian labs cratered prices.^[110] Elon has vigorously denied the whole thing. "He didn't own an emerald mine & I worked my way through college, ending up ~\$100k in student debt," he tweeted in 2019.^[111] In 2023, he offered "a million Dogecoin for proof of this mine's existence."^[112] The most careful reading of the evidence suggests that Errol did receive emeralds from a small, informal, and likely illegal operation for several years, but that the family's primary wealth derived from Errol's engineering and property development business — and that the emerald deal began in 1986, seven years after his divorce from Maye, meaning it had no bearing on the family finances of Elon's earliest childhood.^[113]

In the summer of 1994, Musk held two internships simultaneously in Silicon Valley. By day, he worked at Pinnacle Research Institute in Los Gatos, a startup exploring whether ultracapacitors could serve as a revolutionary fuel source for electric and hybrid vehicles. By evening, he walked over to Rocket Science Games in Palo Alto, a video game company that aimed to bring Hollywood production values to gaming by moving from cartridges to CDs.^[114] At Pinnacle, Musk "fell in love with the work" and began using it as the basis for business plan experiments at Penn.^[115] At Rocket Science Games, he was hired to write low-level code — drivers for joysticks and mice — but quickly exceeded his brief. Peter Barrett, one of the company's

co-founders, recalled: “He was completely unflappable. After a short while, I don’t think anyone was giving him any direction, and he ended up making what he wanted to make.”¹¹¹⁶

That same summer, the brothers drove cross-country in a beat-up 1970s BMW 320i that Kimbal had bought with money from his College Pro Painters franchise. They drove from San Francisco through the Mojave Desert — a hundred and twenty degrees, no air conditioning — across Colorado, Wyoming, South Dakota, and Illinois, brainstorming business ideas the whole way.¹¹¹⁷ The best idea they came up with was an online network for doctors. It didn’t fly. “We didn’t love it,” Kimbal said.¹¹¹⁸

What they did love was the internet, which by 1995 had reached the steep inflection point of a technology about to transform everything. In August, Netscape went public in one of the most spectacular IPOs in history, its stock nearly tripling on the first day. Musk was supposed to start a PhD in materials science and engineering at Stanford that fall. Stanford confirmed his acceptance.¹¹¹⁹ His intended research would have built on his ultracapacitor work at Pinnacle, advancing energy storage for electric cars — the professor he would have studied under was William Nix, an emeritus expert in materials science.¹¹²⁰ But the web was exploding. In a 2005 email, Musk later admitted the real calculation: “Actually, I didn’t really care much for the degree, but I had no money for a lab and no legal right to stay in the country, so that seemed like a good way to solve both issues. Then the internet came along, which seemed like a much surer bet.”¹¹²¹

He reportedly lasted two days. Stanford itself has “no record of him enrolling.”¹¹²² Professor Nix, the man Musk says he spoke to about deferring, later told *The Stanford Daily* he had “no memory” of meeting Musk in 1995, though he saw “no reason to doubt” Musk’s account. Nix added that such a departure was “extremely rare” — “I can’t remember any other case where someone came, became a student and then immediately went off and started a company.”¹¹²³

Before launching anything, Musk tried to get a conventional job. He sent his résumé to Netscape Communications. Nobody responded. Then he went to Netscape’s offices in person and stood in the lobby, trying to summon the courage to introduce himself. “I actually tried hanging out in the lobby,” he later confessed, “but I was too shy to talk to anyone. So I’m just like standing in the lobby. It was pretty embarrassing. I was just sort of standing there trying to see if there’s someone I could talk to and then I just couldn’t... I was too scared to talk to anyone. So then I left.”¹¹²⁴

Unable to get hired, he would have to start something. The spark came from an encounter during one of his 1994 internships, when a Yellow Pages salesman had come into the office to pitch online business listings and “clearly had little grasp of what the Internet actually was.” Kimbal remembered Elon’s reaction: “These guys don’t know what they are talking about. Maybe this is something we can do.”¹¹²⁵ The brothers even tried to pitch the Yellow Pages directly on the idea of partnering to put their listings online. The executive picked up the massive Yellow Pages book and hurled it at Kimbal. “You ever think you’re going to replace this?” he said.¹¹²⁶

On November 9, 1995, Elon and Kimbal Musk incorporated Global Link Information Network in Palo Alto, California, along with a friend named Greg Kouri.¹¹²⁷ The idea was an online city

guide — a business directory with maps, a kind of Yellow Pages for the internet. Musk often explained it through pizza: “Everyone deserved the right to know the location of their closest pizza parlor and the turn-by-turn directions to get there.”^[128] They scraped together roughly fifteen thousand dollars in seed money — two thousand from Elon, five thousand from Kimbal, and eight thousand from Kouri.^[129] Musk has been emphatic about this point: “We started Zip2 with ~\$2k from me plus my overclocked home-built PC, ~\$5k from my bro & ~\$8k from Greg Kouri,” he tweeted in 2019, pushing back against claims his father bankrolled the venture. He acknowledged Errol later contributed ten percent of a roughly two-hundred-thousand-dollar angel round “but by then risk was reduced & round would’ve happened anyway.”^[130]

They rented a tiny office at 430 Sherman Avenue in Palo Alto — roughly twenty feet by thirty feet, in a three-story building with no elevator and toilets that “often backed up.”^[131] There was no money for an apartment. For the first three months, Elon and Kimbal lived at the office, keeping their clothes in a small closet and showering at the local YMCA. Elon slept on a beanbag next to his desk.^[132] An early employee named Jeff Heilman remembered: “Almost every day, I’d come in at seven thirty or eight A.M., and he’d be asleep right there on that bag. Maybe he showered on the weekends. I don’t know.” Musk asked employees to give him a kick when they arrived so he could wake up and get back to coding.^[133] Meals came from the Jack in the Box across the street. “Sometimes we ate four meals a day at Jack in the Box,” Kimbal said. “It was open twenty-four hours, which suited our work schedule.”^[134]

The internet connection was obtained through creative means. Musk drilled a hole in the drywall near his office door and strung an Ethernet cable down the stairwell to the floor below, where an entrepreneur named Ray Girouard ran an ISP. “They were slow to pay a couple of times but never stiffed me on the bill,” Girouard recalled.^[135] The company had one computer. Musk coded the product himself in C and C++ — the website ran during the day, serving users, and Musk wrote new code at night. “The website was up during the day and I was coding it at night, seven days a week, all the time,” he said.^[136] He combined a cheap license to a Palo Alto business database with free Navteq digital map data to build the first working version.^[137] To impress potential investors, Musk built a large plastic-and-wooden case around a standard PC, mounted it on a base with wheels, and rolled it into meetings as if it were a mini-supercomputer. “The investors thought that was impressive,” Kimbal recalled with a grin.^[138]

The company that would soon be renamed Zip2 was, at that moment, two brothers from Pretoria sleeping on beanbags in a converted office, eating fast food four times a day, and building a product for a medium — the World Wide Web — that most people in America had never used. The immigration situation was murky at best. At a 2013 event, Kimbal blurted out that the brothers “were illegal immigrants.” Elon, sitting beside him on stage, corrected this to “more of a gray area.”^[139] A former Zip2 board member, Derek Proudian, later put it more carefully: their immigration status “was not what it should be for them to be legally employed running a company in the U.S.”^[140]

None of that mattered to the twenty-four-year-old hunched over his single PC at three in the morning on Sherman Avenue. He had gotten out of Pretoria, survived the boiler rooms of British Columbia, talked his way into Queen’s and Penn, turned down Stanford, been too scared to speak to a receptionist at Netscape, and was now building something — anything — from scratch. His

website address was www.totalinfo.com.^[141] It was not an auspicious name. But the product worked, the internet was accelerating, and the boy who had read the Encyclopaedia Britannica by age nine, who had coded Blastar at twelve, who had been beaten unconscious on a concrete staircase and berated by his father for the trouble — that boy was, for the first time, exactly where he wanted to be.

Bill Gates

Profile

On a snowy day in December 1974, a college dropout named Paul Allen trudged through the slush of Harvard Square and stopped at the Out of Town News kiosk. He slapped down seventy-five cents for the January issue of Popular Electronics, whose cover promised "World's First Minicomputer Kit to Rival Commercial Models." [Harvard Gazette](#) Allen tucked the magazine under his arm and broke into a trot toward Currier House, [Harvard Gazette](#) where a nineteen-year-old sophomore named Bill Gates [harvard](#) was probably playing poker or sleeping off a thirty-six-hour coding binge. When Allen burst through the door and showed him the Altair 8800, [The Harvard Crimson](#) Gates began rocking back and forth — a lifelong habit, [Voteviewharvard](#) involuntary as a heartbeat [harvard](#) — and the two of them understood, with the clarity of people who had been preparing for exactly this moment since they were teenagers, that they were about to either seize the future or watch it leave without them. Everything that came next — the frantic phone call, the bluff, the eight-week coding sprint, the bootstrap loader written on an airplane, [GeekWire](#) the four-kilobyte miracle that would become the foundation of the world's most valuable company — flowed from a peculiar convergence of privilege, obsession, talent, and accident [MiamiDaily](#) that had been building since the day William Henry Gates III was born in Seattle twenty years earlier.

He arrived on October 28, 1955, [Wikipedia](#) the second child and only son of William Henry Gates II and Mary Maxwell Gates. [WikipediaDucksters](#) The family called him "Trey" — card-player's slang for three, [CNN](#) because despite being the third William Henry Gates in the line, his father had carried the suffix "II." [SlideShareWikipedia](#) The nickname came from his maternal grandmother, [LocalSyrSimplyknowledge](#) Adelle Maxwell, whom the family called "Gam," a fiercely competitive woman who taught young Bill card games [VoteviewSimplyknowledge](#) and instilled in him the conviction that winning was the natural order of things. [Seen & Unseen](#)

The world he was born into was comfortable, connected, and civic-minded. His father stood six feet six inches tall, [ABC NewsTime](#) a quietly imposing corporate lawyer who had served in the U.S. Army in postwar Tokyo before earning his law degree at the University of Washington on the G.I. Bill. In 1964, he co-founded the Seattle firm Shidler McBroom & Gates, [K&L Gates](#) which eventually became Preston Gates & Ellis and then merged into the global giant K&L Gates. [Wikipedia](#) He served as president of both the Seattle–King County Bar Association and the Washington State Bar Association [Wikipedia](#) and sat on the boards of seemingly every civic institution in the city. Warren Buffett would later observe of the father-son relationship: "Bill becomes Senior's son in his presence. There's an affection, respect, and admiration that goes both ways and is very deep." [ABC News](#)

Mary Maxwell Gates was, if anything, the more formidable parent. [Wikipedia](#) A Seattle native, valedictorian of her high school class and a star basketball player, [HistoryLink.org](#) she earned her education degree at the University of Washington in 1950 [Wikipedia](#) and taught junior high school [Geni](#) before pouring her considerable energy into civic leadership. She became the first woman to chair the national executive committee of United Way. She served on the boards of First Interstate Bank [Pioneering Minds](#) of Washington, [SlideShareTime](#) Pacific Northwest Bell, [FamousFix](#) and KIRO, the CBS television and radio affiliate. For eighteen years she was a regent of the University of Washington, [Wikipedia](#) appointed by Governor Dan Evans. [HistoryLink.org](#) Her tenure on the United Way executive committee alongside IBM's CEO John Opel would later, in one of history's tidier ironies, help her son's tiny software company secure its transformative deal with Big Blue [The Famous People](#) — but that was years away, and no one was writing those plotlines yet.

The family's prominence had roots. Mary's grandfather, James Willard Maxwell, had served as president of the National City Bank in Seattle [SlideShareWikipedia](#) and as a director of the Seattle branch of the Federal Reserve Bank of San Francisco. [Peoplepill](#) The Maxwells were one of Seattle's most socially prominent families. This was not robber-baron wealth but something more durably Pacific Northwestern: upper-middle-class civic aristocracy, the kind of family that volunteered relentlessly, entertained lavishly, and expected its children to serve. "Volunteering and philanthropy were nightly topics of conversation around the Gates family dinner table," according to a family obituary. [Legacy.com](#)

Bill had an older sister, Kristianne — known as Kristi [SlideShareWikipedia](#) — born in 1954, [NewsBreak](#) who would grow up to become a certified public accountant and, with quiet humor, serve as her brother's tax accountant. His younger sister, Elizabeth — Libby [SlideShareWikipedia](#) — arrived in 1964, [NewsBreak](#) nine years his junior. [Time](#) Libby would later recall, with the unflinching honesty of a sibling, that her brother was "kind of weird" and "always locked in his messy, book-strewn room for hours as a kid." She added: "I think left to his own devices he might have stayed in his room and read books all day long." [GeekWire](#)

This was not far from the truth. Around third or fourth grade, Bill began reading the World Book Encyclopedia — not as a reference, but cover to cover, the way other children read adventure novels. He reportedly made it through the letter P before other obsessions intervened. [Simplyknowledge](#) At View Ridge Elementary School in Seattle, his fourth-grade teacher, Hazel Carlson, pegged his IQ "in the 160s or 170s" — among the highest she had ever encountered. She noticed that his initially neat left-handed writing "would quickly disintegrate into a scrawl as he tried to get as many things down on paper as he could produce in his mind." [The Seattle Times](#) The school librarian, Blanche Caffiere, took him under her wing. [Benzinga](#) She later remembered the arrival of "a slight fellow in blue jeans and a blue T-shirt" with "sandy hair, blue

eyes, and a sprinkle of freckles over his nose." [Christian Science Monitor](#) Young Bill brought a special intensity to assignments: at age nine, he hauled a freshly removed cow's lung, still dripping blood, to show-and-tell to demonstrate oxygen transfer. "A little girl fainted," he would recall decades later with what one reviewer described as "unfeigned pride." [The Spectator](#) His father had apparently been the one to suggest the slaughterhouse. [Benzinga](#)

The competitiveness was ambient and inescapable. The Gates household enforced a strict no-television rule on school nights; instead, the family played cards, board games, [Bedtime History](#) and held trivia contests. [Bedtime History](#) Risk and Monopoly were favorites. [Simplyknowledge](#) Bill Gates Hearts was played with the gravity of contract negotiations. [Seen & Unseen](#) Sunday dinners were followed by games of Password and bridge. [CNN +2](#) Bill Gates Sr. would punctuate dinner parties with provocative questions — "Who is the most influential person in your life?" — expecting everyone at the table to answer. [The Seattle Times](#) Each summer, the family joined eight or nine other families at a cluster of rental cabins called "Cheerio" on Hood Canal, about two hours from Seattle, [ABC News](#) where Bill Sr. was affectionately known as "the mayor." [The Seattle Times](#) Saturdays featured tennis tournaments. Sundays brought the Olympics — a hybrid of athletic competitions and mental games. [Time](#) "It didn't matter whether it was hearts or pickleball or swimming to the dock," one family visitor recalled. "There was always a reward for winning, and there was always a penalty for losing." [Wikipedia](#) Trey, his father noted, "was more into the individual sports, such as water skiing, than the team ones." [Time](#)

But the competitiveness carried a shadow at home. By age nine, the boy had become, in his own later words, "an adult overnight — an argumentative, intellectually forceful, and sometimes not very nice adult." [The Washington Post](#) He was at war with his mother Mary, who harbored the entirely reasonable belief that her son should do what she told him. She would call him to dinner from his basement bedroom — a room she had long since given up trying to make him clean — and he wouldn't respond. [Time](#) One evening she demanded over the intercom: "What are you doing?" He shouted back: "I'm thinking." "You're thinking?" "Yes, Mom, I'm thinking," he said fiercely. [Time](#) "Have you ever tried thinking?"

When Bill was in sixth grade, his parents sent him to a psychologist. [Time](#) [Wikipedia](#) "We became concerned about him when he was ready for junior high," his father later explained. "He was so small and shy, in need of protection, and his interests were so very different from the typical sixth grader's." [Time](#) In his 2025 memoir *Source Code*, Gates described [GeekWire](#) "frightening emotional outbursts at home" [Medium](#) — the behavior of what he called "such an angry, withdrawn child." [Post Alley](#) The psychologist turned out to be, in Gates' recollection, "a really cool guy. He gave me books to read after each session, Freud stuff, and I really got into psychology theory." After a year of sessions and a battery of tests, the counselor reached his conclusion. [Time](#) He sat down with Mary Gates and delivered one of the more consequential

pieces of parenting advice in American business history: "You're going to lose. You had better just adjust to it because there's no use trying to beat him." Mary was strong-willed and intelligent herself, her husband recalled, "but she came around to accepting that it was futile trying to compete with him." [Time](#) The therapist's other recommendation: get the boy out of public school.

Despite their deep belief in public education, Bill and Mary Gates enrolled their son at Lakeside School, the elite all-boys preparatory academy in north Seattle, in the fall of 1967. He entered seventh grade. Lakeside sat on a thirty-acre campus where approximately 340 boys [The Seattle Times](#) wore jackets and ties, called their teachers "Master," and attended chapel every morning. It sent a quarter of its graduates to Ivy League schools. Gates was not immediately enthusiastic. "When I was in 6th grade, and my mom and dad suggested I go to Lakeside, I wasn't too sure about it," he later told the school's graduating class. "For a while, I even thought about failing the entrance exam." [CNBC +3](#)

He didn't fail it. And within a year, something happened at Lakeside that would prove more consequential than any class, any teacher, any social dynamic at the school — though there were important ones of all three. In 1968, a math and science teacher named Bill Dougall, a former World War II Navy pilot, persuaded the Lakeside Mothers' Club to use the proceeds from its annual rummage sale [Wikipedia](#) — approximately three thousand dollars — to lease a Teletype Model 33 ASR terminal and purchase a block of time on a General Electric Mark II time-sharing computer, accessible by telephone line. [Medium](#) Gates was in eighth grade. [The Seattle TimesWorldhistoryproject](#) He was thirteen years old. [Worldhistoryproject](#) "The whole idea of time-sharing only got invented in 1965," he later marveled. "Someone was pretty forward-looking." What made this extraordinary was scale: in 1968, most university graduate programs didn't have computing resources this advanced. [Medium](#) And here it was, available to eighth graders. Gates wrote his first program [Worldhistoryproject](#) — a tic-tac-toe game [Wikipedia](#) — and was hooked. "There was just something neat about the machine." [Worldhistoryproject](#)

He was not alone at the terminal. Paul Gardner Allen, [Britannica](#) a tenth-grader two years Gates' senior, had enrolled at Lakeside [achievementClever Tykes](#) in 1965 [Wikipedia](#) and was already deeply into electronics and science fiction. Allen was taller, more laid-back, broader in his interests — he loved Jimi Hendrix and would later own the Portland Trail Blazers and fund a museum of science fiction. Gates was smaller, more aggressive, and more business-minded. Allen would later describe him as "a gangly, freckle-faced eighth-grader" with a "scruffy-preppy look" who was "already a budding entrepreneur." The two circled each other around the computer terminal and fell into an obsessive partnership. Late one night, Gates showed Allen a copy of Fortune magazine and asked: "What do you think it's like to run a Fortune 500 company?" Allen said he had no idea. "Maybe we'll have our own computer company someday," Gates said. [Medium](#) He was thirteen.

Around them coalesced a group: Ric Weiland, Allen's classmate, a brilliant programmer who would later become Microsoft's second employee; and Kent Evans, [Wikipedia](#) a boy Gates' own age [MediumScreenRant](#) who carried a lawyer's briefcase stuffed with gadgets and magazines and who was, by Gates' account, "the best student in the class." [Medium](#) The four of them formed the Lakeside Programmers Group [QuatrTATLER](#) and proceeded to run up astonishing amounts of computer time. When the Mothers' Club allocation ran out, they found their way to Computer Center Corporation — nicknamed "C-Cubed" — a time-sharing startup in Seattle's University District that operated one of the first commercially available DEC PDP-10 mainframes in the country. [Wikipedia](#) The four teenagers discovered they could exploit bugs in the operating system to obtain free computing time. [Worldhistoryproject +2](#) They logged in, dumped pages of unzeroed memory to harvest passwords, and ran up hours they weren't paying for. [Google](#) When C-Cubed's owner, Dick Hamlet, discovered the exploit, the students were banned for the summer. [Worldhistoryproject +2](#)

But the ban didn't last. C-Cubed's business was suffering from system crashes and weak security, and the company made the teenagers an offer: find bugs for us, and you can have unlimited computer time. [TATLER +2](#) Gates dove in. He went to C-Cubed's offices and studied source code written in FORTRAN, LISP, and machine language. [WorldhistoryprojectWikipedia](#) "It was when we got free time at C-Cubed that we really got into computers," he said. "I mean, then I became hardcore. It was day and night." [WorldhistoryprojectSEO](#) When C-Cubed went bankrupt [Wikipedia](#) in March 1970, [WikipediaFandom](#) the group found another patron: Information Sciences Inc., a company in Portland, Oregon, that hired them to write a payroll program in COBOL in exchange for free computer time and royalties. [WorldhistoryprojectFandom](#) In one seven-month period in 1971, the teenagers logged 1,575 hours of computer time on ISI's mainframe — an average of eight hours a day, seven days a week. [The Jolly Investor](#) Gates was pulled from regular classes for extended periods, and Lakeside tolerated it.

Within the group, the power dynamics were revealing. When Gates and Evans ended up doing most of the ISI work and the older boys tried to elbow them aside, Gates made his position clear. "I said, 'Look, if you want me to come back you have to let me be in charge. But this is a dangerous thing, because if you put me in charge this time, I'm going to want to be in charge forever after.'" [National Museum of American History](#) He was fifteen.

The school, recognizing his abilities, asked Gates and Evans to build a computerized class-scheduling system [WorldhistoryprojectWikipedia](#) — a complex optimization problem involving hundreds of students and dozens of constraints. Gates wrote the program in FORTRAN. Later, he would confess to the modification that has since become legend: "By the time I was done, I found that I had no classes at all on Fridays. And even better, there was a

disproportionate number of interesting girls in all my classes. Now that's relevance!" [TATLER](#)
[+3](#)

Meanwhile, a different kind of obsession was forming. In 1972, when Intel announced the 8008 microprocessor, Gates and Allen saw an opportunity. [Wikipedia](#) They scraped together \$360 for a chip [Newsweek](#) and started Traf-O-Data, a venture to automate the reading of raw data from roadway traffic counters and produce reports for traffic engineers. [Fandom](#)[Bill Gates](#) They recruited Paul Gilbert, a University of Washington electrical engineering student, to build the hardware. [Fandom](#) Allen wrote an 8008 emulator on a university mainframe to test software before the machine was ready. [Fandom](#) The working prototype took two years and \$1,500. [Newsweek](#) When they invited a representative from King County to see a demonstration, it failed spectacularly. "When the guy from the County that Seattle's in came to see it, it didn't work," Gates would recall. [Substack](#) Between 1974 and 1980, Traf-O-Data accumulated net losses of \$3,494. [Newsweek](#) Allen would later write: "Traf-O-Data remains my favorite mistake because it confirmed to me that every failure contains the seeds of your next success." [Newsweek](#) The 8080 emulator experience, built on the scaffold of Allen's earlier 8008 work, would prove directly and critically useful.

In the middle of all this, Gates found time to explore other identities. Teacher Ann Stephens got him to audition for the school play [gatesfoundation](#) — Peter Shaffer's *Black Comedy*, a one-act farce — and he won the lead role of Brindsley Miller, [NewsBreak](#) performing in Lakeside's chapel. "He was very enthusiastic about acting," his father recalled. [Time](#) Gates became smitten with his co-star, Vicki Weeks, and invited her to prom. She turned him down. [NewsBreak](#) In ninth grade, he devised what he called "a new form of rebellion. I hadn't been getting good grades, but I decided to get all A's without taking a book home. I didn't go to math class, because I knew enough and had read ahead, and I placed within the top 10 people in the nation on an aptitude exam." [Time](#) In the spring of 1971, he served as a legislative page in Olympia, the state capital, and the following summer, Congressman Brock Adams — a family friend — arranged for him to serve as a congressional page on Capitol Hill. [Wikipedia](#)[HistoryLink.org](#) The experience convinced him that politics was not his calling. [CNBC](#)

And then, on May 28, 1972, Gates got a phone call from the headmaster. His best friend Kent Evans — who had decided to broaden his horizons by signing up for a University of Washington mountaineering course — had fallen to his death [Wikipedia](#)[Wikipedia](#) on Mount Shuksan. He was seventeen years old. [GrippedGeekWire](#) "I had never thought of people dying," Gates said, [CNNTIME](#) and when he spoke of it a quarter-century later, Walter Isaacson noted "a flicker of emotion" crossing his face that was otherwise absent. In his memoir, Gates wrote: "I had no notion of a friend just being gone. It shapes you, that someone can just disappear — somebody you loved and would have done things with." [LocalSyr](#) He still remembered Evans' phone number: 525-7851. [Medium](#)[National Museum of American History](#) "I sorta thought, hey O.K.,

now I'm going to do these things that we talked about, but I'll do it without Kent." [Gripped](#) That summer, he dealt with the grief the way he would deal with loss for the rest of his life: he threw himself into twelve-hour coding sessions in the empty high school computer room, sleeping on an army cot on the deserted campus. [The Spectator](#) Paul Allen, who had graduated and enrolled at Washington State University, came back to help Gates finish the scheduling program Evans had been working on. [LocalSyr +3](#)

That Christmas, the phone rang again — but this time it brought opportunity. Bud Pembroke, who had connected the boys with ISI, called to say that TRW, the defense contractor, was desperately behind on a software project for the Bonneville Power Administration and needed programmers experienced with PDP-10 systems. [eNotes](#)[The Jolly Investor](#) Someone at Digital Equipment Corporation, asked to recommend the best PDP-10 debuggers in the region, had said: "Well, there's Gates and Allen." TRW didn't know they were teenagers. "So these two kids show up," Gates recalled, "and I was 16 when they interviewed me. So they were like, 'We can't hire you.' But then they talked to us about software and we clearly knew a lot." [Academy of Achievement](#) They were hired at \$165 per week [HistoryLink.org](#) — four dollars an hour. [The Columbian](#) Gates received a leave of absence from Lakeside, [HistoryLink.org](#) treating the work as a senior project. He and Allen rented an apartment at the Brandywine Apartments in Vancouver, Washington, [The Columbian](#) drove down in Gates' orange 1967 Mustang convertible, and spent months debugging code for the BPA's power grid dispatch system at TRW's facility near Hazel Dell. Gates held contests "to see who could stay in the building like three days straight, four days straight." [The Columbian](#) A senior programmer named John Norton became his mentor, showing him errors and giving him books. [eNotes](#) The code they debugged — the RODS system — came online a year later and ran the BPA's operations for thirty-eight years. [Wikipedia](#)

Gates graduated from Lakeside in 1973 [Celeb Answers](#) as a National Merit Scholar [Wikipedia](#) with an SAT score of 1590 out of 1600. [Wikipedia](#)[Celeb Answers](#) (Paul Allen, characteristically, had scored a perfect 1600.) [SupertutorTV](#) The school that had once received him as an "unfocused and undisciplined 7th grader" [The Seattle Times](#) had tolerated his eccentricities, unleashed his abilities, and — through a three-thousand-dollar rummage-sale investment in a teletype terminal — inadvertently set the course of the computing industry. As Gates would tell the school's graduates years later: "If there had been no Lakeside, there would have been no Microsoft." [Medium +5](#)

He arrived at Harvard in September 1973, [The Harvard Crimson +2](#) seventeen years old, a National Merit Scholar who had applied to exactly three schools — Harvard, Yale, and Princeton [Southerntidemedia](#) — with shrewdly different personas for each. For Harvard, he emphasized his passion for mathematics. For Yale, he cast himself as an aspiring political type. For Princeton, computer engineering. [harvard](#) He was accepted everywhere and chose Harvard,

[Southerntidemediaharvard](#) as his family expected. Paul Allen warned him that he would encounter people at Harvard who were smarter than he was. [HistoryLink.org](#) "No way! No way!" Gates shot back. [harvard](#)

He was assigned to Wigglesworth Hall with two roommates: Sam Znaimer, a science student from Montreal, and Jim Jenkins, a student from Chattanooga. [Harvard Gazette](#) Gates had specifically requested an African American and an international student as roommates. [harvard](#) He was nominally pre-law — his father's profession, his family's expectation [SlideShare](#) — but [Wikipedia](#) he never got around to declaring a concentration, and the law held no particular pull on his imagination. What pulled him was mathematics, and specifically Math 55, Harvard's legendarily brutal honors course in advanced calculus and linear algebra, which compressed four years of mathematics into two semesters [Wikipedia](#) and was widely considered the most difficult undergraduate math class in the country. [Wikipedia](#) The 1973–74 section was taught by John Mather, [Columbia University](#) who would later win the Fields Medal. Gates attacked the problem sets through the night with his Wigglesworth neighbor Andy Braiterman, fueled by pizza. [Harvard Gazette](#)[harvard](#) He was good. But he was not the best. "I met several people in the math department who were quite a bit better than I was in math," he admitted. "It changed my mind about going into math." [Harvard Gazette](#)[harvard](#)

He pivoted to applied mathematics and computer science, taking graduate-level courses with an ease that unnerved some faculty. He enrolled in Applied Math 251, taught by Jeffrey P. Buzen — "the only computer course I officially took at Harvard," Gates later said, [The Harvard Crimson](#) though it was rare for a freshman to take a graduate seminar. [The Harvard Crimson](#) He took Economics 2010 with Michael Spence, who would win the Nobel Prize. In his sophomore year, he took Applied Math 122 — a combinatorics course taught by Harry Lewis [Wikipedia](#) — and when Lewis posed the "pancake sorting problem" on the first day of class, Gates returned two days later with an algorithm [Wikipedia](#) requiring at most $5n/3$ flips. [Wikipedia](#) The solution was published as a scholarly paper, co-authored with teaching assistant Christos Papadimitriou, [harvard](#) and it held the record as the most efficient known version for over thirty years. [Wikipedia](#)

After freshman year, he moved to Currier House, [VIAstudy](#) a Radcliffe residence [Harvard Gazette](#) he preferred because it had "more women" and "mostly science-math types." [Harvard Gazette](#)[Harvard Gazette](#) His roommate there was Monte Davidoff, [The Harvard Crimson](#) a freshman from Milwaukee studying applied mathematics. He developed a rebellious academic rhythm: he would skip lectures for courses he was enrolled in and audit courses he wasn't. [harvard](#) Professor Tom Cheatham granted him rare undergraduate access to the PDP-10 mainframe at the Aiken Computation Laboratory — a resource normally reserved for graduate students [The Harvard Crimson](#) — and Gates spent most of his waking hours there. His roommate Znaimer described his work cycle: "His habit was to do thirty-six hours or more at a stretch,

collapse for ten hours, then go out, get a pizza, and go back at it. And if that meant he was starting again at 3 in the morning, so be it." [Harvard Gazette](#)[harvard](#)

When he wasn't coding, he was playing poker. His game was Seven Card Stud, high-low, and the stakes were real: a thousand dollars or more could change hands in a single night. [harvard](#) Robert Margolskee, a classmate, recalled: "We played poker starting at typically nine o'clock at night, and then played through till 7:00 a.m., more so to have breakfast, and then go to sleep and wake up in the afternoon." [The Harvard Crimson](#) Gates was, by most accounts, mediocre at it — "better at assessing the cards than in reading the thoughts of his fellow players," Isaacson wrote. He gave Allen his checkbook to prevent himself from hemorrhaging more money, then demanded it back. Allen recalled: "He was getting some costly lessons in bluffing. He'd win \$300 one night and lose \$600 the next. As Bill dropped thousands that fall, he kept telling me, 'I'm getting better.'" [harvard](#)

Allen was in Boston by then, having dropped out of Washington State University after two years to take a programming job at Honeywell [HistoryLink.org](#) +2 — located, by strategic design, close enough to Cambridge that he could make regular visits to Gates' room at Currier House. The two talked constantly about starting a company. Allen was the one pushing hardest, [Vt](#) convinced the personal computer revolution was imminent. Gates was restless but noncommittal. A fellow Currier House resident, Leszek Sachs, recalled: "I remember him speaking of having 'ideas' he wanted to carry out in the world, and he was feeling frustrated that he felt 'too tied up with classes' to do them yet." [The Harvard Crimson](#)

It was at Currier House that Gates met Steve Ballmer [Wikipedia](#)[CNN](#) — big, boisterous, extroverted, the diametric opposite of the wiry, rocking programmer. [CNN](#) Ballmer was in the Hasty Pudding Club, managed the football team, sold advertising for the Harvard Crimson, and published the literary magazine *The Advocate*. [Harvard Gazette](#) What bound them was, in Isaacson's phrase, "shared super-intensity." They would "talk and argue and study together at high volume, each of them rocking back and forth." They watched movies together — *Singin' in the Rain* and *A Clockwork Orange*, "which are only connected," Isaacson noted, "by the use of a common song." [Harvard Gazette](#)[harvard](#) They played pinball near the Currier House grille at all hours. [The Harvard Crimson](#) Decades later, they would name their joint gift to the Harvard computer science building — Maxwell Dworkin Laboratory — after their mothers: [Wikipedia](#) Mary Maxwell Gates and Beatrice Dworkin Ballmer. [Wikipedia](#)

But while Ballmer represented the social world Gates moved through at Harvard, Allen represented the future pulling him away from it. And in December 1974, the future arrived on a newsstand.

Walter Isaacson called it "the most momentous purchase of a magazine in the history of the Out of Town News stand in Harvard Square." [harvard](#) Allen, bundled against the cold, wandered into the cluttered kiosk and saw the January 1975 issue of Popular Electronics. [harvard](#)[Harvard Gazette](#) On its cover: the MITS Altair 8800, [History of Informationachievement](#) a blue-and-gray metal box with toggle switches and blinking LEDs on its front panel, no keyboard, no screen, 256 bytes of RAM, [Wikipedia](#) available as a kit for \$397. [HistoryLink.org](#)[Virtualaltair](#) It was, the magazine declared, the "World's First Minicomputer Kit to Rival Commercial Models." [Tehratchet](#) It had been designed by Ed Roberts, a former Air Force engineer in Albuquerque, New Mexico, whose company, Micro Instrumentation and Telemetry Systems, [Wikipedia](#) was \$300,000 in debt from a disastrous calculator price war and betting everything on this machine. Roberts had chosen the Intel 8080 microprocessor, which he'd negotiated down to \$75 per chip. The name "Altair" had been suggested by the twelve-year-old daughter of Popular Electronics editor Les Solomon, who was watching Star Trek and said they were going to the star Altair that night. [Adwater & Stir](#)

None of this backstory mattered to Allen in the moment. He slapped down his seventy-five cents, grabbed the magazine, and ran through the slush to Currier House. [harvard](#) He found Gates and thrust the magazine at him. "This thing is happening without us," Allen said. [harvard](#) In Gates' retelling at his 2007 Harvard commencement: Allen declared, "Here we are freezing to death, and the revolution has happened without us." [The Harvard Crimson](#)[Harvard Gazette](#) Gates began to rock.

What happened next was a bluff, a sprint, and a small miracle of engineering. Gates called MITS [Wikipedia](#)[Pioneering Minds](#) — or, more precisely, used Allen's name in a deeper voice, because Allen "looked like an adult" while Gates "could pass for a high school sophomore." [harvard](#)[Harvard Gazette](#) He told Ed Roberts they had a working BASIC interpreter for the Altair. They did not. [Wikipedia](#) They did not even have an Altair. [Wikipedia](#) +2 Roberts, who had optimistically expected to sell maybe two hundred units [Adwater & Stir](#) and was now drowning in over a thousand orders, [Wikipedia](#) said the first person to walk in with working software gets the deal. Gates hung up the phone. "God, we gotta get going on this!" he said. [Harvard Gazette](#)

Allen built an Intel 8080 emulator on Harvard's PDP-10 at the Aiken Lab [Harvard Gazette](#) — drawing directly on the 8008 emulator he had written years earlier for Traf-O-Data. [Wikipedia](#) Gates began designing the BASIC interpreter itself, working on yellow legal pads, his fingers stained from a rainbow of felt-tip pens. [Harvard Gazette](#) He needed someone to write the floating-point arithmetic routines — the mathematical engine that would allow the interpreter to handle decimal calculations. One night at the Currier House dining hall, sitting at a table with other math students, Gates and Allen began complaining about the tedious task ahead. A curly-haired kid from Milwaukee named Monte Davidoff piped up: "I've written those types of

routines." Gates and Allen peppered him with technical questions [Harvard Gazette](#) and recruited him on the spot. [harvard](#)

For eight weeks, the three of them holed up at the Aiken Lab, day and night. [Harvard Gazette](#) Gates stopped playing poker. He stopped attending classes. He ignored the exam cramming he was supposed to be doing. [The 16%](#) Allen later remembered watching Gates code: "I can still see him alternately pacing and rocking for long periods before jotting on a yellow legal pad, his fingers stained from a rainbow of felt-tip pens." [Harvard Gazette](#) And then the collapse: "He'd be in the middle of a line of code when he'd gradually tilt forward until his nose touched the keyboard. After dozing an hour or two, he'd open his eyes, squint at the screen, blink twice, and resume precisely where he'd left off — a prodigious feat of concentration." [Harvard Gazette](#) [The 16%](#) They broke for meals at Harvard House of Pizza or Aku Aku, an ersatz Polynesian restaurant. [Harvard Gazette](#) [The 16%](#) They competed obsessively to write the most compact code. "I can do it in [Harvard Gazette](#) nine,' one would shout. Another would shoot back, 'Well, I can do it in five!'" [harvard](#)

By late February 1975, they had compressed an entire BASIC interpreter [The 16%](#) — including its own I/O system, line editor, and Davidoff's floating-point routines — into 3.2 kilobytes of code. [The 16%](#) fitting within the Altair's four-kilobyte memory and leaving roughly 790 bytes for user programs. It had been written and tested entirely on an emulator, without anyone in the group ever touching an actual Altair 8800. The software existed on a roll of punched paper tape.

Allen flew to Albuquerque. On the plane, he realized they had forgotten one thing: the bootstrap loader — the tiny program needed to instruct the Altair to read the paper tape into its memory. He wrote it in raw 8080 machine language in his seat, finishing before the plane touched down. [GeekWire](#) [Miami Living](#) Ed Roberts picked him up at the airport in a pickup truck and drove him to the MITS storefront, located in a strip mall next to a massage parlor.

At MITS headquarters, Allen flipped the toggle switches on the Altair's front panel, manually entering the bootstrap loader in binary. He fed in the paper tape. It took almost fifteen minutes to load. Then the Teletype clattered to life and printed a single question: MEMORY SIZE? Allen typed 7168. The machine responded: READY. Allen typed PRINT 2+2. The Altair printed 4.

Ed Roberts, who had been watching quietly, shouted: "Oh my God, it printed '4!'" [GeekWire](#)

The software had worked on the first try, on hardware its creators had never seen. Allen called Gates in Cambridge. Gates celebrated with his usual: a Shirley Temple — ginger ale with maraschino cherry juice. He was nineteen years old.

Roberts agreed to license the BASIC interpreter and hired Allen as Vice President and Director of Software at a salary of \$30,000 per year. On July 22, 1975, MITS signed a formal contract: a \$3,000 payment at signing, royalties for each copy of BASIC sold, and a ten-year exclusive worldwide license. The company needed a name. Allen came up with it: Micro-Soft, a portmanteau of "microcomputer" and "software." The hyphen would be dropped within a year.

When it came time to formalize the partnership, Allen assumed it would be fifty-fifty. Gates had other ideas. "It's not right for you to get half," he told Allen. "You had your salary at MITS while I did almost everything on BASIC without one back in Boston. I should get more. I think it should be sixty-forty." Allen was taken aback but agreed: "All in all, I thought, a 60-40 split might be fair." On April 4, 1975, they made it official: Microsoft was founded with Gates holding sixty percent and Allen forty percent. Gates took a leave of absence from Harvard — "If things hadn't worked out," he later said, "I could always go back to school. I was officially on leave." He never went back. When Allen asked him how big the company could get if everything went right, Gates paused and answered: "I think we could get it up to thirty-five programmers."

Their first employee was Ric Weiland — the same Lakeside classmate who had been with them at C-Cubed, finding bugs on a PDP-10 when they were all teenagers. Microsoft's first office was in Albuquerque, New Mexico, on Route 66, near their only client. Its total income for 1975 was \$16,005. Gates was nineteen. Allen was twenty-two. And in a strip mall in the desert, beside a massage parlor, built on a rummage-sale teletype terminal and a failed traffic-counting business and eight weeks of sleepless coding on a borrowed mainframe and a bootstrap loader written on an airplane and a cow's lung brought to show-and-tell and a therapist who told a mother she was going to lose — a company had begun.

Mark Zuckerberg

Profile

Mark Elliot Zuckerberg built his first networking software at age 12, turned down million-dollar acquisition offers as a teenager, and launched a site from his Harvard dorm room that would reshape human communication — all before his 20th birthday. The arc from Dobbs Ferry, New York, to thefacebook.com on February 4, 2004, is a story of relentless curiosity, a tech-saturated household, elite education, and a series of programming projects that each foreshadowed the one that would change everything. What follows is an exhaustive biographical account of every documented period of Zuckerberg's life up to and including Facebook's founding, drawn from primary sources including Harvard Crimson articles, the New Yorker profile by Jose Antonio Vargas, TIME's Person of the Year feature, David Kirkpatrick's *The Facebook Effect*, court documents from the ConnectU lawsuit, and interviews with family members and classmates.

Mark Elliot Zuckerberg was born on May 14, 1984, in White Plains, New York, [The Famous People Wikipedia](#) the second of four children and the only son of Edward and Karen Zuckerberg. His father, Edward Zuckerberg, [Investing.com](#) DDS, FAGD [Havoc Digital Wikipedia](#) — known to patients as "Painless Dr. Z" [Time Techy Bizz](#) — earned his biology degree from Brooklyn College in 1975 and his dental degree from New York University College of Dentistry in 1978. His mother, Karen Kempner Zuckerberg, [Havoc Digital Wikipedia](#) attended the Bronx High School of Science, Brooklyn College for her undergraduate degree, and New York Medical College for her psychiatry training. [Biography Talks](#) Edward and Karen met on a blind date [South China Morning Post](#) in the early 1970s while Edward was studying at NYU and Karen was at Brooklyn College. They married in 1979 and moved first to an apartment in White Plains, then purchased a home in Dobbs Ferry the following year.

Dobbs Ferry is a small village in Westchester County, roughly 21 miles north of Midtown Manhattan. [Geniuses +2](#) Edward established his dental practice there [Techy Bizz](#) in 1979, operating from 2 Russell Place [Painlessdrz](#) — a modest, gray-paneled house where the dental office occupied the ground floor and the family lived upstairs. The *Seattle Times* described the office as having "low, tiled ceilings" with "soft rock and local traffic reports" playing in the hallways. [The Seattle Times](#) Karen initially worked as Edward's office manager while raising their children. Edward later explained their collaborative approach to fearful patients: "I was fortunate to have my wife Karen, a psychiatrist, partner with me in my practice in our home, and together we developed techniques for dealing with phobic patients." Karen eventually left the dental practice to return to psychiatry. According to Edward, speaking to *New York Magazine*: "She saw those people in the chair, and she didn't want her kids to turn out to be one of them." [Heavy Sports](#)

Mark's three sisters are Randi [The Famous People](#) (born February 28, 1982), Donna (born 1987), and Arielle [Nicki Swift](#) (born approximately 1989). [Wikipedia](#)[AOL](#) Randi graduated from Harvard [Nicki Swift](#) in 2003 with a psychology degree. [Wikipedia](#) later became one of Facebook's first 50 employees, [InfoSeeMedia](#) and went on to found Zuckerberg Media and win three Tony Awards. Donna earned a PhD in Classics from Princeton [CBS News](#)[Wikipedia](#) and authored *Not All Dead White Men: Classics and Misogyny in the Digital Age*. Arielle studied at Claremont McKenna College and became a venture capitalist, now a general partner at Long Journey Ventures. [InfoSeeMedia](#)

The family was raised in a Reform Jewish household, [The Famous People](#)[Geniuses](#) with great-grandparents who emigrated from Austria, Germany, and Poland. [Wikipedia](#)[Genea.net](#) Mark had a Star Wars–themed bar mitzvah [Time](#) at age 13 at Temple Beth Abraham in Tarrytown, New York. [The Forward](#) Rabbi David Holtz recalled the young teenager as "a thoughtful and insightful teen" [Rabbijason](#) who "thought very deeply about pretty much anything he was asked about." [Daily Voice](#) The family also took a congregational trip to Israel when Mark was 15. In his 2017 Harvard commencement speech, Zuckerberg referenced learning about tikkun olam — repairing the world — in Hebrew school. [The Forward](#)

Randi Zuckerberg has painted a vivid picture of the household: "We were that super geeky, nerdy household... many hours of Nintendo... We were always up to something creative. We were always inventing, we were always collaborating." [AOL](#) She added: "I think my parents really created an atmosphere where we could feel free to fail... They were like, 'Just try it, and if you fail, just get up and try again or try something else.'" [Yahoo!](#) The children were "much given to pranks." On New Year's Eve 1999, when the parents were anxious about the Y2K bug, Mark and Randi waited until the stroke of midnight and then shut off the power in the house. [Time](#) The family also filmed a complete Star Wars parody called *The Star Wars Sill-ogy* over a winter vacation. Randi recalled: "Every morning we'd wake up and have production meetings. Mark's voice hadn't changed yet, so he played Luke Skywalker with a really high, squeaky voice, and then my little sister, who I think was 2, we stuck her in a garbage can as R2D2 and had her walk around." [Time](#)

Edward's description of his son's personality is now legendary. As he told *TIME* for the 2010 Person of the Year profile: "For some kids, their questions could be answered with a simple yes or no. For Mark, yes by itself would work, but no required much more. If you were going to say no to him, you had better be prepared with a strong argument backed by facts, experiences, logic, reasons. We envisioned him becoming a lawyer one day, with a near 100% success rate of convincing juries." He described Mark simply as "strong-willed and relentless." [Time](#)

Edward Zuckerberg computerized his dental office shortly after Mark was born in 1984 [The Forward](#) and was an early adopter of digital radiography, paperless records, [Painlessdrz](#) and

intraoral cameras. The children grew up immersed in technology. "My kids all grew up around the office and were all exposed to computers," Edward told CBS News. [The Forward](#) "There are advantages to being exposed to computers early on. That certainly enriched Mark's interest in technology." [CBS NewsClever Tykes](#)

Mark received his first personal computer — a Quantex 486DX running Windows 3.1 [Time](#) — at approximately age 10 [TimeEBSCO](#) (circa 1994). As the New Yorker profile famously observed: "Some kids played computer games. Mark created them." [Wikipedia +3](#) Edward had an early Atari computer that came with a programming cartridge: "I thought Mark might be interested and I imparted that knowledge to him. From there it took off." [The Forward](#) Zuckerberg himself later said: "Learning how to program didn't start off with wanting to learn all of computer science or trying to master this discipline or anything like that. It started off because I wanted to do this one simple thing — I wanted to make something that was fun for myself and my sisters." [Self-TaughtCNN](#)

When Mark's talent became obvious, his parents hired David Newman, a software developer, to tutor him privately. [Pressfarm +2](#) Newman came to the house once a week to work with the boy. [SSSgramFresher Post](#) He "quickly realised Zuckerberg's talent and labelled the then 11-year-old a 'prodigy.'" [Medium](#) Newman later told the New Yorker: "He was a prodigy. Sometimes it was tough to stay ahead of him." Remarkably, Newman lost track of Zuckerberg and was stunned to learn during the interview for the 2010 profile that his former pupil had built Facebook. [The New Yorker](#)

At approximately age 12 (circa 1996), Mark created [Weebly](#) "ZuckNet" — a messaging program [Solveisraelproblems](#) that connected all the computers in the family home to his father's dental office. [TripplezerobillionairesWikipedia](#) "The dentists and hygienists needed to share data on the patients," Zuckerberg explained. "So I built a system where he could communicate with folks across rooms, and also communicate with me and my sisters upstairs — and I called it ZuckNet." [Clever Tykes](#) The practical trigger, according to the New Yorker, was simple: "One afternoon in 1996, Edward declared that he wanted a better way of announcing a patient's arrival than the receptionist yelling, 'Patient here!'" [The New Yorker](#) ZuckNet was developed approximately one year before AOL Instant Messenger was released, making it a remarkably precocious creation. [Fresher Post](#) Zuckerberg later clarified, "out of both modesty and a compulsion for accuracy, that they brought in a professional to do the wiring" for the home network. [Time +2](#)

The family embraced ZuckNet enthusiastically. One famous anecdote from the TIME profile: "One day in the ZuckNet era, Mark turned to Randi and said, 'I bet I can make Donna come upstairs in five seconds.' He'd rigged his sister's computer to announce that it was self-destructing in 5, 4, 3, 2... and up the stairs she came." [Time](#) Randi called ZuckNet "the first

example of when he started building things — and he never stopped," noting her brother was "10 levels ahead" even at age 11. [Geekhmer](#)

Mark built numerous other programs during this period. He created [Aithor](#) a version of Monopoly set at his middle school, a version of Risk based on the Roman Empire, [Time +2](#) and a snowball fight game with stick figure graphics. He recalled: "I made this game... about a snowball fight that I could play with my sisters, and I think the graphics were literally stick figures." His sisters preferred playing it over having an actual snowball fight outside. [Benzinga](#) He told the New Yorker: "I had a bunch of friends who were artists. They'd come over, draw stuff, and I'd build a game out of it." [Wordpress +3](#) In eighth grade, he showed his science teacher Chris Walsh a wireframe display of rocks and crystals that rotated, providing a 360-degree view on screen. [Daily Voice](#)

Mark also took a graduate-level computer science course at Mercy College, [SSSgram +2](#) a private university located on Broadway in Dobbs Ferry, near the family home. [Daily Voice](#) [Richest Wikia](#) He was still in middle school or early high school. When Edward dropped him off at the first class, the instructor looked at the father and said, pointing to Mark, "You can't bring him to the classroom with you." Edward explained that his son was the student. [The New Yorker](#) Mark learned Atari BASIC first, [Clever Tykes +3](#) then progressed to C++ and other languages, [Self-Taught](#) and attended the Johns Hopkins Center for Talented Youth summer camp. [Geneanet](#)

Zuckerberg attended Ardsley High School [The Famous People +4](#) in the Ardsley School District for approximately two years (his freshman and sophomore years, roughly 1998–2000). Ardsley Middle School teacher Martha Snegroff remembered young Mark as "assertive and opinionated, even at a young age. He was pretty self-confident... When he had an opinion, he stuck to his opinion." [Daily Voice](#) Science teacher Chris Walsh recalled "a well-adjusted kid who got along with every social group and was well-liked by his classmates" with "a sense of humor and hearty laugh," [Daily Voice](#) though he added: "He was certainly a smart kid, but I don't think he was at the top of the class." [Daily Voice](#)

At Ardsley, Mark excelled in classes [Fresher Post](#) — particularly classics and literature — and was too advanced for the AP Computer class. Edward "never remembered Mark having to study at home at all." According to Steven Levy's Facebook: The Inside Story, thanks to a charismatic teacher at Ardsley, Mark developed a love for classic literature and an especial fondness for Caesar Augustus [Yonkers Times](#) — a fascination that would persist throughout his life. But the school's limitations became apparent. As Zuckerberg later told the Harvard Crimson: his public school "didn't have a lot of computer courses or a lot of the higher math courses." [Encyclopedia.com +2](#)

He transferred to Phillips Exeter Academy, the prestigious boarding school in Exeter, New Hampshire, [The Famous People +2](#) entering as a junior around 2000 and graduating with the Class of 2002. Exeter, founded in 1781, [Wikipedia](#) is known for its Harkness method of discussion-based instruction, a 5:1 student-teacher ratio, and what was then the world's largest high school library. [Wikipedia](#) Its Latin motto, Non Sibi ("Not for oneself"), would prove ironic in retrospect.

At Exeter, Zuckerberg flourished academically but remained socially reserved. According to Levy's book, he was "quite shy at Exeter, writing code in his dorm room most of the time," but "eventually got famous at the school for his coding and programming genius." [Yonkers Times](#) A classmate told [GreekReporter](#) that Zuckerberg's reputation was that of someone "very intelligent, quiet and, for lack of a better word, a computer nerd." [GreekReporter.com](#) He won prizes in mathematics, astronomy, physics, and classical studies, [Celebrity Net Worth +3](#) earned what sources describe as a classics diploma, and was captain of the fencing team. [Wikipedia](#) [Wordpress](#) On his college application, Zuckerberg stated he could read and write French, Hebrew, Latin, and ancient Greek. [Platinummediagroup +3](#) Sean Parker, who later became a close friend, noted that Zuckerberg was "really into Greek odysseys and all that stuff," recalling how he once quoted lines from Virgil's Aeneid during a Facebook product conference. [Platinummediagroup](#) [Medium](#)

The most consequential product of Zuckerberg's Exeter years was the Synapse Media Player, built as a senior-year project [Wordpress](#) with classmate and close friend Adam D'Angelo [EBSCO](#) (who later founded Quora). D'Angelo, from Redding, Connecticut, [Wikipedia](#) was himself a programming prodigy — he placed eighth in the 2001 USA Computing Olympiad [Grokikipedia](#) and won a silver medal at the 2002 International Olympiad of Informatics. [Quora](#) [Wiki](#) Operating under the name "Intelligent Media Group," they created an AI-powered MP3 player that learned users' listening habits and automatically generated playlists. [The Famous People +4](#) Zuckerberg explained the genesis simply: "The playlist ran out on my computer, and I thought, 'You know, there's really no reason why my computer shouldn't just know what I want to listen to next.' So that's what we made." [The Harvard Crimson +2](#)

Synapse was released in September 2002 [thecrimson](#) and made available for free download. Its website, synapseai.com, carried the slogan "My brain is better than yours." [TechCrunch](#) [The Harvard Crimson](#) Seven months after release, the technology site Slashdot ran a feature on the program, [Wordpress](#) and corporate interest poured in. Both Microsoft and AOL tried to purchase the software and recruit Zuckerberg, [EBSCO +5](#) with offers reportedly reaching \$950,000 to \$2 million. [thecrimson](#) [TechCrunch](#) The Harvard Crimson reported Zuckerberg's account: "One of the companies offered us \$950,000 but wanted us to go work for them for 3 years." [The Harvard Crimson](#) [thecrimson](#) They also began communicating with Microsoft but, as Zuckerberg told the Crimson, "they backed out when they began to suspect that the multi-billion dollar corporation was going to rip them off." To protect their work, the pair split the \$12,000 cost of a patent. [The](#)

Harvard Crimson Ultimately, they chose college over commerce. In the crimson "We wanted to go to college, so we said no." Zuckerberg declared: "It's important to us that people are able to use the software for free. The Harvard Crimson Software belongs to everyone." the crimson

One more detail from Exeter proved prophetic. The school published a student directory called "The Photo Address Book," which students commonly referred to as "The Facebook." Wikipedia During Zuckerberg's senior year, student body president Kris Tillery successfully lobbied the administration to put the directory online WikipediaGreekReporter.com at student.exeter.edu/facebook. Both Tillery and Zuckerberg went on to attend Harvard. Tillery watched as Zuckerberg used a strikingly similar concept — with the same name — to build a fortune. He eventually deleted his Facebook account because it was "making him feel bad." Yonkers Times

Zuckerberg enrolled at Harvard in the fall of 2002 Britannica +3 as part of the Class of 2006, arriving with what the New Yorker called "a reputation as a programming prodigy." WikipediaGeniuses He sometimes wore a T-shirt with a little ape on it and the words "Code Monkey." The New Yorker Remarkably, his primary reason for choosing Exeter had been its Latin program, and he originally intended to study classics at Harvard. "The current computer science concentrator originally intended to study classics at Harvard," the Crimson reported. The Harvard Crimson +2 He ultimately pursued a double concentration in computer science and psychology and joined Alpha Epsilon Pi, Wikipedia +3 a Jewish fraternity. Wikipedia

As a freshman, Zuckerberg lived in Harvard Yard. Starting in his sophomore year (fall 2003), he moved to Suite H33, Kirkland House, CNBCWikipedia where he lived with roommates including Dustin Moskovitz and Chris Hughes. Wikipedia The suite — two bedrooms with bunk beds and desks, a hallway, and a common room — was described by reporters as cluttered with "half-empty cans of Red Bull, dirty laundry scattering the floor and crumpled brown paper bags." The Mail & Guardian The Harvard Crimson's June 2004 profile captured him "wearing a yellow t-shirt, blue jeans, and open-toe Adidas sandals," sitting "on a ragged couch in the middle of a messy Kirkland House common room, surrounded by strewn clothes and half-closed boxes." The Harvard Crimson the crimson

Zuckerberg described himself with disarming honesty: "I'm just like a little kid. I get bored easily and computers excite me. Those are the two driving factors here." The Harvard Crimson the crimson The Crimson observed: "When Zuckerberg starts a programming project, all else takes a backseat. He doesn't eat, doesn't sleep, doesn't talk to friends." The Harvard Crimson the crimson He would pull all-nighters fueled by Hot Pockets heated in a small microwave. CNBC "Half the things I do I don't release," he explained. "I spent five hours programming last night, and came up with something that was kind of cool, showed it to a bunch

of my friends, and the rest of campus will never know about it." [thecrimson](#) Among his unreleased projects: a screensaver displaying friends' AIM away messages, an MP3 synchronization tool, and a plan to get everyone at Harvard to play the same song simultaneously — "I thought that would be really funny." [The Harvard Crimson](#) [thecrimson](#)

His first public project at Harvard was CourseMatch, built during his sophomore year. [Wikipedia](#) It let students [Wikipedia](#) click on a course to see who was signed up, or click on a person to see their course selections. [Geniuses +2](#) As Kirkpatrick wrote in *The Facebook Effect*: "If a cute girl sat next to you in Topology, you could look up next semester's Differential Geometry course to see if she had enrolled in that as well." Hundreds of students immediately began using it. [LibraryAware](#) [CNN](#) Zuckerberg noted with pride that "you could link to people through things" [LibraryAware](#) — a concept that pointed directly toward Facebook's social graph.

Then came Facemash. On the evening of October 28, 2003, a bored and slightly drunk Zuckerberg began chronicling his thought process on his blog, [The Harvard Crimson](#) "Zuckonit." The entries — later used almost verbatim in Aaron Sorkin's *The Social Network* — became legendary:

8:13pm: "I need to think of something to occupy my mind. Easy enough — now I just need an idea..." [Social Student](#)

9:48pm: "I'm a little intoxicated, not gonna lie. So what if it's not even 10pm and it's a Tuesday night? What? The Kirkland facebook is open on my computer desktop and some of these people have pretty horrendous facebook pics. I almost want to put some of these faces next to pictures of farm animals and have people vote on which is more attractive. It's not such a great idea and probably not even funny, but Billy comes up with the idea of comparing two people from the facebook, and only sometimes putting a farm animal in there. [Social Student](#) Good call Mr. Olson! I think he's onto something."

12:58am: "Let the hacking begin. First on the list is Kirkland. They keep everything open and allow indexes in their Apache configuration, so a little wget magic is all that's necessary to download the entire Kirkland facebook. [Social Student](#) Child's play." [swcswordpress](#)

Over the next hours, he systematically hacked into the photo directories of Harvard's residential houses, writing Perl scripts and noting the security weaknesses of each. ("Another Beck's is in order," he wrote at 1:52am while compiling code.) [swcswordpress](#) By 7:30am on Halloween morning, the site was finished. [Metro US +3](#) Facemash placed two randomly selected student photos side by side and asked users to choose the "hotter" person, [First Versions +4](#) ranking students by attractiveness with what Zuckerberg called "a very Turing feel."

The result was explosive. Within a single day, 450 visitors cast more than 22,000 votes. [Influize +5](#) The site's traffic overwhelmed one of Harvard's network switches, preventing some students

from accessing the internet. [Wikipedia](#) Student groups including Fuerza Latina and the Association of Black Harvard Women condemned the site. [Metro US](#) +3 Zuckerberg shut it down within approximately two days [Swcs](#) and sent apology emails: "I hope you understand, this is not how I meant for things to go, and I apologize for any harm done as a result of my neglect to consider how quickly the site would spread and its consequences thereafter." [Metro US](#) [thecrimson](#) He was brought before Harvard's Administrative Board, [Wikipedia](#) accused of breaching security, violating copyrights, and violating individual privacy. [Fortune](#) He was not expelled or forced to withdraw. [The Harvard Crimson](#) [Wikipedia](#) The specific sanctions were never publicly disclosed. [Wikipedia](#)

But Facemash's most important consequence was personal. "Everyone thought I was going to get kicked out," Zuckerberg recalled in his 2017 Harvard commencement speech. "My parents came to help me pack. My friends threw me a going away party." [Fortune](#) +2 It was at this farewell party — at the Pforzheimer House Belltower — that he met Priscilla Chan, then a freshman biology major. They met in line for the bathroom [Yahoo Finance](#) while "Get Low" by Lil Jon played. His opening line: "I'm going to get kicked out in three days, so we need to go on a date quickly." [Yahoo!](#) +2 Chan remembered: "He was this nerdy guy who was just a little bit out there. [TheStreet](#) I remember he had these beer glasses that said 'pound include beer dot H.' It's a tag for C++." [CNBC](#) +2 Years later, Zuckerberg would say of Facemash: "That movie made it seem like Facemash was so important to creating Facebook. It wasn't. [Fortune](#) But without Facemash I wouldn't have met Priscilla, and she's the most important person in my life, [Fortune](#) [Yahoo!](#) so you could say it was the most important thing I built in my time here." [Fortune](#) +2

In early November 2003, [Wikipedia](#) just as the Facemash controversy was dying down, Zuckerberg received an email from Divya Narendra — a Harvard senior from Bayside, Queens, [Wikipedia](#) who was collaborating with identical twins Cameron and Tyler Winklevoss (Harvard seniors from Greenwich, Connecticut, members of the Porcellian Club and the varsity crew team). [Wikipedia](#) The trio had conceived HarvardConnection, [Wikipedia](#) a social networking site [EBSCO](#) requiring Harvard.edu email verification, [Fieldlaw](#) in December 2002. [The tokendispatch](#) [Wikipedia](#) They had already cycled through two programmers — Sanjay Mavinkurve (who left after graduating) and Victor Gao [Wikipedia](#) — and needed someone to finish the code. [Wikipedia](#) Narendra wrote to Zuckerberg: "We're very deep into developing a site which we would like you to be a part of and... which we know will make some waves on campus." [Wikipedia](#)

On November 25, 2003, the Winklevoss twins and Narendra met Zuckerberg in the Kirkland House dining hall. They explained the concept, the expansion plans, and the confidential nature of the project. [Wikipedia](#) Zuckerberg agreed to help. [Slidebean](#) What followed, according to

court documents containing 52 emails exchanged between the parties, [Wikipedia](#) was a pattern of enthusiasm followed by delay: [Grokikipedia](#)

November 30: "I read over all the stuff you sent and it seems like it shouldn't take too long to implement."

December 1: "I put together one of the two registration pages so I have everything working on my system now."

December 4: "Sorry I was unreachable tonight."

December 10: "The week has been pretty busy thus far, so I haven't gotten a chance to do much work on the site or even think about it really." [Wikipedia](#)

On January 11, 2004 — while still nominally the lead programmer for HarvardConnection — Zuckerberg registered the domain thefacebook.com. [TheincmagazineReflections](#) Three days later, on January 14, he met with the HarvardConnection team and told them he was too swamped to continue. He did not disclose his own project or the domain registration. [Theincmagazine](#) Leaked instant messages, confirmed as authentic by Zuckerberg in the New Yorker profile, revealed his private thinking. [Adam Curry](#) When a friend asked what he planned to do about the HarvardConnection situation, Zuckerberg replied bluntly: "yea i'm going to fuck them... probably in the ear." [Boing Boing](#)

The Winklevoss twins and Narendra learned of thefacebook.com from the Harvard Crimson [Thetokendispatch](#) on February 6, 2004 [Wikipedia](#) — two days after it launched. [Grokikipedia +2](#) They sent a cease-and-desist letter [Wikipedia](#) on February 10 [Wikipedia](#) and lodged complaints with the Administrative Board and President Larry Summers, who advised them to take the matter to court. [Wikipedia +2](#) The resulting lawsuit, filed in September 2004, alleged breach of contract, misappropriation of trade secrets, and fraud. [Thetokendispatch +2](#) It was settled [Wikipedia](#) in February 2008 for \$20 million in cash and \$45 million in Facebook stock [NBC News +5](#) — a total that grew to approximately \$120 million as Facebook's valuation soared. [Wikipedia](#)

The intellectual seeds of Facebook drew from multiple sources: CourseMatch's social data, Facemash's viral energy, Exeter's Photo Address Book, and a Harvard Crimson editorial that argued a centralized online directory's "benefits are many" [Wikipedia](#) but that Facemash's problems could be eliminated "if only the site had limited itself to students who voluntarily uploaded their own photos." [LibraryAware](#) That insight — letting people control their own information — became the founding principle.

Zuckerberg told the Crimson: "Everyone's been talking a lot about a universal face book within Harvard. I think it's kind of silly that it would take the University a couple of years to get around to it. I can do it better than they can, and I can do it in a week." [The Harvard Crimson +2](#) A classmate added: "There was definitely a little bit of a 'fuck you' to Harvard. They always said

they were going to do a centralized facebook, but they had all these worries about how it's their information... Mark just figured you could get people to upload the information themselves."

LibraryAware

In January 2004, Zuckerberg Wikipedia buried himself in his dorm room and coded. Wikipedia "When he buried himself in his room to work on thefacebook.com late last January, his roommates almost forgot he was there." The Harvard Crimsonthe crimson The site was built using PHP and MySQL, Wikipedia running on a single server costing \$85 per month. The Harvard CrimsonSelf-Taught His co-founder Eduardo Saverin Corwin — a junior from a wealthy Brazilian family, Medium living in Eliot House, president of the Harvard Investment Association, and a fellow Alpha Epsilon Pi member Wikipedia who had made \$300,000 from oil futures investments Celebrity Net WorthWikipedia — provided the crucial financial backing. They each initially invested \$1,000, Wikipedia +2 with Saverin later contributing additional funds totaling approximately \$15,000–\$19,000. Celebrity Net Worth Years later, Saverin described this as investing "the majority of my life savings." South China Morning Post Zuckerberg received roughly two-thirds ownership; Saverin, one-third. Porter's Five Forces

Andrew McCollum, a computer science student, designed the original logo MabumbeNewser — a man's face overlaid with binary code — and the initial visual identity, Bigframe despite protesting he wasn't a graphic designer. Mabumbe Zuckerberg told him flatly: "There's no one else to do it. You just have to figure it out." Newser Dustin Moskowitz, Zuckerberg's roommate and an economics major, became a programmer. Wikipedia Chris Hughes, another roommate who had attended Phillips Academy Andover, handled beta testing, product suggestions, and communications. TimeAlchetron

Thefacebook.com launched on Wednesday, February 4, 2004. The Harvard Crimson +5 It required a valid harvard.edu email address, with name-matching verification and an encrypted confirmation link. The Harvard Crimsonthe crimson Features included profile creation with photos, friend networking modeled on Friendster, course-matching functionality descended from CourseMatch, and extensive privacy controls. The tagline at the bottom of every page read: "A Mark Zuckerberg production."

Zuckerberg told a couple of friends, and one suggested sharing the link on the Kirkland House online mailing list Wikipedia — approximately 300 people. Wikipedia From there, it spread like wildfire. Moskowitz recalled: "By the end of the night, we were Wikipedia actively watching the registration process. Wikipedia Within twenty-four hours, we had somewhere between twelve hundred and fifteen hundred registrants." Wikipedia Reporter Michael Grynbaum, who would write the first Crimson profile of Zuckerberg, remembered: "It was ubiquitous on campus within about 72 hours of launching." Fast Company Within two weeks, 4,300 accounts had been

created. [The Harvard Crimson](#) Within a month, more than half of Harvard's undergraduate population had signed up. [Wikipedia](#)

Early adopter Samuel Sanker '05 recalled: "I logged in and it was so early... it was just a very, very bare bones user interface, and from the day that I signed up, I just thought that it was the greatest thing in the world." [The Harvard Crimson](#) The Harvard.edu email requirement created a sense of trust and exclusivity that distinguished thefacebook from the open-access chaos of MySpace and the declining Friendster. [The Harvard Crimson](#) By March 2004, [Encyclopedia.com](#) it expanded to Stanford, Columbia, and Yale. [Wikipedia](#) By May, 160,000 users across 34 schools had registered. By year's end, it had reached one million. [HISTORY +2](#)

Zuckerberg almost didn't launch it at all. "If I hadn't launched it that day, I was about to just can it and go on to the next thing I was about to do," he told the [Crimson](#). [The Harvard Crimson](#) His stated ambitions were modest, even philosophical: "My goal is to not have a job. Making cool things is just something I love doing, and not having someone tell me what to do or a timeframe in which to do it is the luxury I am looking for in my life." [The Harvard Crimson](#) One friend's decision haunted the early story: Joe Green, who had helped with Facemash, was warned by his father never to get involved in another Zuckerberg project. "So he had the option of joining me on Facebook early on, and turned it down," Zuckerberg later noted with a rueful grin — a decision that cost Green a potential fortune in the billions.

The pre-Facebook Zuckerberg story is not one of a lone genius struck by lightning. It is a story of compounding iterations — ZuckNet begat Synapse, Synapse begat CourseMatch, CourseMatch begat Facemash, and Facemash's controversy catalyzed the insight that became Facebook. Each project taught him something specific: ZuckNet taught him that software connects people across physical space; Synapse taught him that algorithms can learn human preferences; CourseMatch taught him that people are deeply curious about each other's social choices; and Facemash taught him that viral adoption is ferociously powerful — and that privacy must be voluntary, not violated.

The environment that produced this progression was equally specific: a technology-saturated household with a father who handed his son an Atari programming cartridge and a mother who created psychological safety for risk-taking; a tutor who recognized a prodigy and struggled to stay ahead; an elite boarding school that combined classical education with cutting-edge computing; and a university whose social architecture — exclusive residential houses, paper "facebook," status-conscious students — was practically begging to be digitized. On the night he launched Facebook from Kirkland House, Zuckerberg walked to Noch's pizzeria with his friend Kang-Xing Jin and said he was excited to connect the Harvard community but that "one day someone would connect the whole world." Then he added: "The thing is, it never even occurred to me that someone might be us. We were just college kids." He was 19 years old.

Larry Page

Profile

Larry Page's path to founding one of the most consequential companies in human history was shaped by a childhood steeped in technology, a family of academics, a Montessori education that prized self-direction, a 12-year-old's tears over Nikola Tesla, and a midnight dream about downloading the entire World Wide Web. Born Lawrence Edward Page on March 26, 1973, in Lansing, Michigan, [WikipediaAcademy of Achievement](#) he grew up in a household where computers were as common as furniture and scientific curiosity was the closest thing to religion. By the time he incorporated Google on September 4, 1998, [RochesterWikipedia](#) at age 25, every formative experience — from disassembling household appliances to building a Lego inkjet printer to arguing with a brash fellow graduate student named Sergey Brin — had converged into a singular vision: organizing all of human knowledge and making it universally accessible.

Larry Page's family was rooted in Michigan's working class but ascended rapidly through education. His paternal grandfather, Carl Davis Page (1905–1963), left Tennessee to work on the assembly line at General Motors' Chevy plant in Flint, Michigan. He participated in the legendary 44-day sit-down strike of 1937 that forced GM to recognize the United Auto Workers union. [Select Surnames](#) Despite never having attended college himself, he drove his children to Ann Arbor and told them that was where they would go to school. Both did. [github](#)

Larry's father, Carl Victor Page Sr. (1938–1996), overcame childhood polio — spending over a year bedridden [Network WorldPulse 2.0](#) — to become the first in his family to graduate from high school and then college. He earned a bachelor's degree in engineering from the University of Michigan, then a PhD in computer science there in 1965, [WikipediaSelect Surnames](#) making him among the university's earliest graduates in the field. After teaching briefly at the University of North Carolina, he joined Michigan State University in 1967, where he became one of the founding members of the Department of Computer Science and Engineering. [EBSCO](#) He served as the department's first graduate director and taught courses in Automata and Formal Language Theory and Artificial Intelligence — his primary research focus. [Ourbigbook](#) The BBC described him as "a pioneer in computer science and artificial intelligence." [Wikipedia](#) An MSU obituary called him "a prolific scholar and beloved teacher and mentor to innumerable students." [Select Surnames](#)

Larry's mother, Gloria Page (née Weinstein, born 1944), grew up in Newark, New Jersey, in a Jewish family. Her grandparents, Benjamin Weinstein and Yesta Leff, had emigrated from Brest-Litovsk in the Russian Empire to New York in the early 1900s. [Select Surnames](#) Gloria's father, Samuel Weinstein (1912–1988), later emigrated to Israel, settling near the Dead Sea where he worked as a tool-and-die maker [O'Reilly](#) until his death. Gloria became a computer

programming instructor at Lyman Briggs College at Michigan State University, [Wikipedia](#) making both of Larry's parents computer scientists. [ToolsheroAcademy of Achievement](#) Carl and Gloria met at a co-op at the University of Michigan in September 1962 — Gloria was cleaning a ceiling on a ladder when Carl admired the view from below. [githubWhatrocks](#) They later divorced [Wikipedia](#) in 1981, [Select Surnames](#) when Larry was eight. [Wikipedia](#)

Despite the divorce, Larry described himself as "showered with love and wisdom from two mothers" — his biological mother Gloria, and Joyce Wildenthal, an MSU professor who became his father's long-term partner. [Wikipedia](#) Carl Page Sr. was described as fun-loving — he took young Larry to Grateful Dead concerts [O'Reilly](#) — but also argumentative. A colleague named George Stockholm recalled: "He was strangely hard to get along with because he was arguing about everything. He passed this feature on to his son." [Usefulpracticalknowledge](#) Carl's philosophy was that "his religion was technology," [EBSCO](#) and he raised his sons accordingly. Larry later described himself as "an incredibly lucky boy" because "a professor's life is pretty flexible, and he was able to spend oodles of time raising me." [githubWhatrocks](#)

Larry's older brother, Carl Victor Page Jr. (born circa 1963), was nine years his senior [Academy of AchievementOurbigbook](#) and played a crucial formative role. Carl Jr. brought home electronics lab kits from his classes at the University of Michigan and gave them to Larry. He taught his younger brother to take things apart. [InspiremindsWikipedia](#) Larry recalled: "My brother taught me how to take things apart, and I took apart everything in the house." [Academy of Achievement](#) Carl Jr. later became a technology entrepreneur himself, co-founding eGroups (a mailing list management company) [Edge.org](#) with Scott Hassan in 1997, [OurbigbookCirosantilli](#) which Yahoo acquired [Edge.org](#) in 2000 for approximately \$432 million. [O'Reilly](#) When their father died in 1996, Carl Jr. was already living in Silicon Valley — "they had each other, so Larry wasn't left to bear the loss alone." [Ourbigbook](#)

The Page household in East Lansing was, by Larry's own description, "usually a mess, with computers, science, and technology magazines and Popular Science magazines all over the place." [Medium +2](#) He recalled in an Academy of Achievement interview: "I just sort of kept having ideas. We had a lot of magazines lying around our house. It was kind of messy. So you kind of read stuff all the time." [Academy of Achievement](#) The combined influence of this atmosphere and his attentive parents, wrote journalist Nicholas Carlson, "fostered creativity and invention." [Wikipedia](#)

From ages two to seven (approximately 1975–1979), Larry attended Okemos Montessori School (now called Montessori Radmoor) in Okemos, Michigan. [MediumWikipedia](#) This education proved foundational. In a 2004 interview with Barbara Walters, both Page and Sergey Brin — who also attended Montessori school — credited their Montessori education, not their professor parents, as the key to their success. [Fortune](#) Page explained: "We both went to Montessori

school, and I think it was part of that training of not following rules and orders, and being self-motivated, questioning what's going on in the world, doing things a little bit differently." [FortuneOurKids](#) Early Google employee Marissa Mayer later reinforced this: "You can't understand Google unless you know that both Larry and Sergey were Montessori kids." [Internet History PodcastMontessori-blog](#) The Montessori philosophy of self-directed learning directly inspired Google's famous "20% time" policy, as Page acknowledged in a TED talk. [OurKids](#) When Larry was six, in 1979, his father brought home an Exidy Sorcerer computer [Wikipedia](#) — a machine popular in Europe but obscure in America, with 32 kilobytes of memory. Larry soon mastered it and began using it for schoolwork. [Wikipedia](#) His brother Carl Jr. had to write the operating system for it. [Usefulpracticalknowledge](#) Carl Sr. also brought home a dot-matrix printer. [Familycelebs](#) Larry became the first child in his elementary school to turn in an assignment from a word processor [Medium +4](#) — a remarkable distinction in the late 1970s. He also built an electric go-kart "at a pretty early age," [Academy of Achievement](#) signaling the hands-on engineering instinct that would define his career.

The year 1985 marked a turning point. At age 12, Larry read a biography of Nikola Tesla [AppleOne BlogInc](#) — likely *Prodigal Genius: The Life of Nikola Tesla* by John J. O'Neill, though he may also have read Tesla's own *My Inventions* [David J. Kent](#) — and wept. Tesla had invented the alternating current electrical system that powered the modern world, yet died alone in a New York hotel room in 1943, penniless and largely forgotten. [Inc](#) The story devastated Larry but also crystallized a core principle that would drive everything he built afterward. In a 2008 *Fortune* interview, he articulated the lesson bluntly: "You don't want to be Tesla. He was one of the greatest inventors, but it's a sad, sad story. He couldn't commercialize anything, he could barely fund his own research. You'd want to be more like Edison." [David J. Kent](#) He later refined this into a mantra: "Invention is not enough. Tesla invented the electric power we use, but he struggled to get it out to people. You have to combine both things: invention and innovation focus, plus a company that can really commercialize things and get them to people." [InspiredLife HQ +2](#)

That same year, Larry decided he would someday start a company. As he later told interviewers: "From a very early age, I also realized I wanted to invent things. So I became interested in technology and business. Probably from when I was 12, I knew I was going to start a company eventually." [MediumWikipedia](#)

During his adolescence at East Lansing High School (graduating in 1991), [EBSCO](#) [Wikipedia](#) Page demonstrated high proficiency in mathematics and the sciences, [EBSCO](#) and was already "rather knowledgeable in programming and computer systems" by graduation. [Pressfarm](#) He also pursued music seriously, playing saxophone and flute [Stoute Web Solutions](#) and studying music composition. [Wikipedia](#) His parents sent him to Interlochen Arts Camp in northern Michigan for two summers, [VedaonWikipedia](#) where he played "flute but mainly saxophone." [Wikipedia +2](#)

Music left a lasting imprint on his engineering philosophy. He later explained: "In some sense, I feel like music training led to the high-speed legacy of Google for me." He elaborated: "In music, you're very cognizant of time. Time is like the primary thing. If you think about it from a music point of view, if you're a percussionist, you hit something, it's got to happen in milliseconds, fractions of a second." [MediumWikipedia](#) This obsession with speed — milliseconds of latency — would become one of Google Search's defining characteristics.

Steven Levy, author of *In the Plex*, described Page's personality as apparent from a young age: "He was not a social animal — people who talked to him often wondered if there were a jigger of Asperger's in the mix — and he could unnerve people by simply not talking." [Medium](#) Yet his intelligence and ambition were unmistakable. Levy wrote that Page's desire "expressed itself not as a personal drive (though there was that, too)" but as a genuine desire to change the world. "I really wanted to change the world," Page himself said. [Mondotheque](#)

Larry enrolled at the University of Michigan in 1991 and earned a Bachelor of Science in Engineering with a major in Computer Engineering, with honors, [The Famous People](#) in 1995. [Wikipedia](#) His family's connection to the university ran deep — everyone in the family had attended Michigan, and his father had earned "three and a half" degrees there (his PhD was technically in Communication Science "because they thought computers were just a passing fad," as Larry joked in his 2009 commencement speech). [github](#)

At Michigan, Page's engineering creativity flourished. He conceived and built an inkjet printer made of Lego bricks — essentially a line plotter. He had reasoned that it should be possible to print large posters cheaply using standard inkjet cartridges, so he reverse-engineered the ink cartridge and built the electronics and mechanics to drive it [Wikipedia](#) from Lego components. [Wikipedia](#) The project became a frequently cited example of his willingness to approach engineering problems with unconventional materials and first-principles thinking.

He joined the 1993 University of Michigan Solar Car Team [Wikipedia](#) [Academy of Achievement](#) (the "Maize & Blue"), [Wikipedia](#) reflecting what the Academy of Achievement described as "a lifelong interest: sustainable transportation technology." [Academy of Achievementachievement](#) He served as president of the Beta Epsilon chapter of Eta Kappa Nu, [Wikipedia](#) the national honor society for electrical and computer engineering students, [Wikipedia](#) and earned leadership awards for his efforts to improve the environment for all engineering students. [University of Michigan](#) [University of Michigan News](#) He also developed a business plan for a company that would use software to build a music synthesizer, [Wikipedia](#) combining his twin passions for music and technology.

Perhaps the most transformative experience at Michigan was his participation in the LeaderShape Institute, a student leadership-training program whose slogan was "a healthy

disregard for the impossible." [Network World](#) In his 2009 commencement address at Michigan, Page recalled: "When I was here at Michigan, I had actually been taught how to make dreams real! I know it sounds funny, but that is what I learned in a summer camp converted into a training program called LeaderShape." [Network World](#) The program inspired him to propose replacing the university's bus system with a personal rapid transit system [Lanre Dahunsi](#) — "essentially a driverless monorail with separate cars for every passenger." [Wikipedia](#) The proposal went nowhere, but the ambition was characteristic. He added wistfully: "I still think a lot about transportation — you never lose a dream, it just incubates as a hobby." [github +2](#) Years later, Google's self-driving car project would bring that dream to life.

A college friend told Levy that even at Michigan, Page was "controlling and paranoid" — not out of malice, but because "he wanted to make sure everything was done well and right." [Slate](#) Professor Elliot Soloway at Michigan regarded Page as "a very disciplined student" but also emphasized the "hacker mentality" behind him. [Quora](#) When it came time to choose a graduate school, Page said he "expected he would have to make a choice between becoming an academic and building a company. Choosing the former would mean giving up the opportunity to become the inventor of widely used applications. But building a company would force him to deal with people in a way he didn't enjoy." [Inc](#)

Larry arrived at Stanford for the computer science PhD program in the summer of 1995. [Internet History Podcast](#) He initially felt out of place, admitting: "At first it was pretty scary. I kept complaining to my friends that I was going to get sent back home on the bus." [GainweightjournalMedium](#) During a prospective student weekend, a second-year PhD student named Sergey Brin — already at Stanford since 1993, [internethistorypodcastMedium](#) supported by a National Science Foundation Graduate Fellowship [Wikipedia](#) — volunteered to lead a campus tour. [WikipediaInternet History Podcast](#) Their first interaction was legendarily combative. [Gainweightjournal](#) Page recalled: "I thought he was pretty obnoxious. He had really strong opinions about things, and I guess I did, too." [Medium](#) Brin later confirmed: "We both found each other obnoxious." [Internet History Podcast +2](#) But they couldn't stop talking. Brin added: "Obviously we spent a lot of time talking to each other, so there was something there. We had a kind of bantering thing going." [internethistorypodcastWIRED](#) Over the 1995–96 academic year, friends took to calling them "LarryandSergey" — the two were inseparable, debating everything from philosophy to computing to movies, "two equally-matched polymaths thrilling to the intellectual joust." [Internet History Podcast](#)

The two shared striking biographical parallels. Both came from academic families (Brin's father was a mathematics professor at the University of Maryland; his mother a researcher at NASA's Goddard Space Flight Center). [Toolshero](#) Both had attended Montessori schools. [Internet History PodcastToolshero](#) Both were Jewish on at least one side. And both arrived at Stanford with enormous intellectual ambition but no fixed research direction.

Page chose Terry Winograd as his PhD advisor [FourWeekMBA +2](#) — a choice with roots stretching back to childhood. Winograd, famous for his 1970 MIT natural-language program SHRDLU, had moved to Stanford in 1973 [Wikipedia](#) and become a leading figure in human-computer interaction. Page had actually met Winograd for the first time at age seven, [strategy+business](#) through his parents' academic connections. Years later, when researching potential advisors, Page said: "I had sort of researched all the people I could work with and I was surprised that there was basically nobody else in the world who I wanted to work with besides Terry. He was a really solid computer scientist, he understood that side — but he also had a great passion around something that I wanted to work on that I thought was very important, which was HCI." [strategy+business](#) Winograd later wrote of Page: "Larry Page has never been afraid to think big." [Time](#)

Page considered approximately ten potential dissertation topics, [FourWeekMBA](#) including telepresence and self-driving cars. [HandWiki +3](#) Then one night, at age 23, he had a dream that changed everything. In his 2009 Michigan commencement speech, he described it: "I had one of those dreams when I was 23. When I suddenly woke up, I was thinking: what if we could download the whole web, and just keep the links and... I grabbed a pen and started writing! [The PitcherSpark](#) I spent the middle of that night scribbling out the details and convincing myself it would work." [Network Worldgithub](#) The next morning he told Winograd the idea and estimated it would take a couple of weeks to download the web. Winograd "nodded knowingly, fully aware it would take much longer but wise enough to not tell me. The optimism of youth is often underrated!" [Network WorldWikipedia](#) Page later emphasized: "I had no thought of building a search engine. The idea wasn't even on the radar." [Network World](#)

The insight that launched Google was deceptively simple: hyperlinks on the web function like citations in academic papers. If one page links to another, it is effectively "citing" or casting a vote for that page. Page, steeped in the academic world where citation counts measure a paper's importance, realized this principle could rank web pages by quality. As journalist John Battelle wrote, Page reasoned that "the entire Web was loosely based on the premise of citation — after all, what is a link but a citation? If he could devise a method to count and qualify each backlink on the Web, 'the Web would become a more valuable place.'" [WIRED](#)

In March 1996, Page's web crawler began exploring the internet, [WikipediaEBSCO](#) starting from his own Stanford home page as the sole seed URL. [Wikipedia +2](#) He called the system "BackRub" because it analyzed backlinks — who was linking to whom. The project's mathematical complexity attracted Brin, who had been jumping between research projects without settling on a thesis topic. [Wikipedia](#) Brin recalled: [Wikipedia](#) "I talked to lots of research groups around the school, and this was the most exciting project, both because it tackled the Web, which represents human knowledge, and because I liked Larry." [Medium +2](#)

Together they developed the PageRank algorithm [Medium +2](#) — a name that was a deliberate play on words, referencing both "web pages" and Larry Page himself. [PositionalInternet History Podcast](#) The algorithm treated the web as a graph with pages as nodes and hyperlinks as edges. Each link served as a "vote" for the destination page, but not all votes were equal: links from more authoritative pages (those with many high-quality incoming links themselves) carried greater weight. [MediumWikipedia](#) The algorithm was recursive — a page's importance depended on the importance of the pages linking to it. It modeled a "random surfer" who clicks links at random; the probability of landing on any particular page corresponds to its PageRank value. [Wikipedia](#) A damping factor (typically 0.85) represented the probability of continuing versus jumping to a random page, [Computing for All](#) and iterative computation converged the scores.

By August 1996, an initial version was available on Stanford's website [HandWiki +2](#) at google.stanford.edu. [WikipediaStoute Web Solutions](#) By then, BackRub had indexed approximately 75 million URLs and occupied 207 gigabytes. [Ryte Wiki](#) The system was written in Java and Python and ran on Sun Ultras and Intel Pentiums running Linux. [Wikipedia +3](#) The hardware was remarkable for its improvisation: Page assembled ten 4-gigabyte hard drives (40 GB total [Stanford](#) — the largest available) into a storage unit encased in Lego bricks (actually Duplo blocks), translucent plastic, and packing tape. Generic plastic blocks had been tested first but weren't rigid enough, "leading to a literal hard drive crash." This Lego-encased server is now displayed at Stanford's Jen-Hsun Huang Engineering Center. [StanfordStanford InfoLab](#)

Page's dormitory room served as the machine laboratory; [Wikipedia](#) Brin's became the office and programming center. [HandWiki +2](#) They worked in Room 360 of the Gates Computer Science Building, which Page shared with officemates Sean Anderson, Tamara Munzner, and Lucas Pereira. [stanford](#) The project's appetite for computing resources was voracious — BackRub was "known to occasionally bring the entire university network to its knees" [Stanford](#) and consumed nearly half of Stanford's network bandwidth at its peak.

Two other figures played critical but often overlooked roles. Scott Hassan, a Stanford research assistant, was the lead programmer of the original Google search engine and has been called the "unofficial third founder." [GrokikipediaWikipedia](#) Page shared his ideas with Hassan, who wrote much of the code [Wikipedia](#) for BackRub's web crawling, indexing, and ranking systems during late-night coding sessions that often ran from 2 a.m. to 6 a.m. Hassan left before Google was formally incorporated, [Wikipedia](#) later co-founding eGroups with Larry's brother Carl Jr. Alan Steremberg also contributed significantly to the codebase. In their 1998 paper, Page and Brin acknowledged both explicitly: "Scott Hassan and Alan Steremberg have been critical to the development of Google. Their talented contributions are irreplaceable." [Wikipedia +2](#)

In September 1997, Page and his officemate Sean Anderson were brainstorming names for their search engine on a whiteboard in Room 360 of the Gates Building, trying to find a name that evoked the immense scale of data they were indexing. According to a firsthand account by Stanford's David Koller, Anderson verbally suggested "googolplex" [stanford](#) (the number 10 raised to the power of a googol). Page responded with the shortened form "googol" [The Focusstanford](#) (the number 10^{100} , [Computer Timeline](#) originally coined by nine-year-old Milton Sirotta, nephew of mathematician Edward Kasner, [Colitco](#) in the 1940 book *Mathematics and the Imagination*). Anderson, seated at his terminal, searched the domain registry to check availability — but Anderson, as Koller noted, was "not an infallible speller" and typed "google.com" instead of "googol.com." The domain was available. Page liked the accidental misspelling, and within hours registered google.com [Humor in America](#) — the domain registration dating to September 15, 1997. [The Focus +5](#) In their 1998 paper, Page and Brin explained: "We chose our systems name, Google, because it is a common spelling of googol, or 10^{100} , and fits well with our goal of building very large-scale search engines." [Google WikiEBSCO](#)

That paper — "The Anatomy of a Large-Scale Hypertextual Web Search Engine" [achievement](#) — was presented at the Seventh International World Wide Web Conference in Brisbane, Australia, in April 1998 [StanfordSCIRP](#) and published in *Computer Networks* [Google Research](#) (Volume 30, pp. 107–117, 1998). [Semantic Scholar](#) It became one of the most downloaded scientific documents in internet history. [Wikipedia +3](#) The paper described a prototype that had indexed at least 24 million pages [Google ResearchScienceDirect](#) and articulated the argument that existing search engines, which ranked results by keyword frequency, were fundamentally inadequate. The paper's acknowledgments thanked Hassan, Steremberg, faculty members Héctor García-Molina, Rajeev Motwani, Jeff Ullman, and Winograd. [WikipediaStanford InfoLab](#) The research was funded through the Stanford Integrated Digital Library Project, supported by the National Science Foundation, DARPA, and NASA. [Wikipedia +2](#)

Page and Brin were reluctant entrepreneurs. They wanted to finish their PhDs. Their first instinct was to sell or license the PageRank technology to existing search engines and return to academia. They approached several companies and were turned down by all of them. They offered the technology to AltaVista for \$1 million; Digital Equipment Corporation, AltaVista's parent company, was not receptive to outside technology. [EBSCO](#) Yahoo declined as well — its business model was built around being a "portal" that kept users on its own site to see ads and shop, not a tool that sent them away to other websites as fast as possible. However, Yahoo co-founder David Filo was encouraging: he told them to start their own company and come back when the product was more developed. They also approached Infoseek, which declined. [EBSCO](#)

The most famous rejection came from Excite, whose CEO George Bell met with Page multiple times. Page and Brin initially offered to sell Google for \$1 million. Bell passed. [Financhill](#) Venture capitalist Vinod Khosla, who had backed Excite, brokered further negotiations and convinced Page and Brin to lower their price to \$750,000 in cash plus approximately 1% of Excite's equity. [India.com](#) [Financhill](#) Bell recalled the economics were "really ok." But the deal collapsed because Page insisted that Excite rip out all of its existing search technology and replace it entirely with Google's. [Internet History Podcast](#) Bell, who had hundreds of engineers and a culture built around its own technology, refused to effectively fire his engineering team and hand over the product to two Stanford students. [Financhill](#) It was, Bell later said, an unbridgeable gap.

Unable to sell, Page and Brin decided to build a company themselves. Stanford professor David Cheriton, who had a nearby office and knew both students, introduced them to Andy Bechtolsheim, the German-born co-founder of Sun Microsystems, [Wikipedia](#) who by 1998 was a vice president at Cisco Systems. In August 1998, Page and Brin met Bechtolsheim at 8:00 a.m. on the front porch of Cheriton's home in Palo Alto — the early hour dictated by Bechtolsheim's schedule. They gave a quick demo of their search engine. Bechtolsheim was immediately impressed. Without further deliberation, he wrote a personal check for \$100,000 made out to "Google Inc." [Pressfarm](#) — a company that did not yet legally exist. [Wikipedia](#) +2 The check sat in Larry Page's desk drawer for approximately two weeks while he and Brin scrambled to incorporate and open a bank account. [Interesting Engineering](#) Cheriton, inspired by Bechtolsheim's enthusiasm, wrote his own matching \$100,000 check. [Yahoo Finance](#)

Ram Shriram, a former Netscape VP and Amazon executive who had been quietly mentoring Page and Brin, invested \$250,000. [YourStory](#) Then Jeff Bezos entered the picture. Shriram, who had come to Amazon through its acquisition of his startup Junglee, told Bezos about Google. [Wikipedia](#) During a Bay Area vacation, Bezos requested a meeting. Shriram hosted a breakfast at his home where Page and Brin demonstrated the search engine. [Yahoo Finance](#) Bezos invested \$250,000 at 4 cents per share, [Medium](#) even though the funding round had formally closed — his stature as Amazon's CEO made Page and Brin willing to extend it. [Wikipedia](#) Bezos later said simply: "I just fell in love with Larry and Sergey." [Inc](#) Between these four angel investors and additional friends-and-family contributions, Google raised approximately \$1 million in initial funding. [Rochester](#) +2

Google Inc. was incorporated in California on September 4, 1998, [Rochester](#) [Wikipedia](#) with Larry Page as CEO and Sergey Brin as President. [EDN](#) Their first office was the garage of Susan Wojcicki [Wikipedia](#) [About You](#) at 232 Santa Margarita Avenue, Menlo Park, California. [achievement](#) +2 Wojcicki, [achievement](#) a recent MBA graduate [ABC News](#) from UCLA whose father was chair of Stanford's physics department, [Wikipedia](#) had purchased the house [ABC News](#) for approximately \$600,000 and rented the garage to Page and Brin for \$1,700 per month

[Search Engine Land](#) +2 to help with her mortgage. [Yahoo Finance](#) The connection came through mutual friends in Stanford's orbit. (Brin did not meet Wojcicki's younger sister Anne, whom he would later marry in 2007, until after the garage rental began.)

The garage scene was distinctly unglamorous: clunky desktop computers, bright blue carpet, a ping-pong table. [About You](#) Wojcicki recalled "late nights together in the garage eating pizza and M&Ms, where they talked to me about how their technology could change the world." [Yahoo Finance](#) Craig Silverstein, a fellow Stanford PhD student [Rochester](#) advised by Professor Rajeev Motwani, became Google's first employee [Vedaon](#) (technically employee #3 after the founders), hired in September 1998 at a salary of roughly \$65,000 plus stock options. [Celect](#) He dropped out of his PhD program to join full-time as Director of Technology. [Wikipedia](#)

Stanford University, meanwhile, retained ownership of the PageRank patent [EBSCO](#) [Wikipedia](#) — US Patent No. 6,285,999, "Method for node ranking in a linked database" — since the work had been done by a student on campus. Stanford granted Google an exclusive license in exchange for [EBSCO](#) 1.8 million shares of Google stock [Patentology](#) [Wikipedia](#) and an initial payment of approximately \$50,000. [jacklaublog](#) Stanford sold those shares in 2005 for \$336 million [Patentology](#) [Wikipedia](#) — more than half the university's entire annual research budget. By the end of 1998, Google had indexed approximately 60 million pages. [Google Wiki](#) [Wikipedia](#) By February 1999, the startup had eight employees and moved to a proper office in Palo Alto. [HISTORY](#) The Lego-encased servers, the garage, and the argumentative partnership of two men who initially found each other obnoxious had produced something that would reshape how humanity accesses knowledge.

What emerges from the accounts of those who knew Larry Page before Google is a portrait of profound introversion married to almost reckless ambition. Levy described him as someone who "could unnerve people by simply not talking." [Medium](#) Yet he was simultaneously driven by convictions of enormous scope. He wanted not merely to build products but to solve civilization-scale problems — transportation, energy, the organization of all human knowledge. Four formative influences shaped this worldview: his grandfather's labor activism, which instilled a sense of fighting for systemic change; his Montessori education, which taught self-direction and skepticism of arbitrary rules; his grief over Tesla's fate, which fused invention with the imperative of commercialization; and the LeaderShape Institute's exhortation to maintain "a healthy disregard for the impossible." [Education](#) [horizons](#)

His father's death from pneumonia [Network World](#) in May 1996, at age 58 [Inside Philanthropy](#) [Select Surnames](#) — a consequence of lifelong polio — came just months into the BackRub project and before Google existed even as a concept. Larry was 23. He remained enrolled at Stanford, anchored by his brother Carl Jr.'s presence in Silicon Valley. [Ourbigbook](#) He later found his father's 1956 valedictorian speech at Flint Mandeville High School, in which Carl

Sr. told his classmates: "We live in a special time, when we can witness the development of science." [github](#) Larry named his philanthropic [Toolshero](#) foundation the Carl Victor Page Memorial Foundation in his father's honor. [Inside Philanthropy +2](#)

In the end, the quiet boy from East Lansing who took apart everything in his house, who cried over a dead inventor, who dreamed of downloading the entire web in his sleep, built exactly what he had resolved to build at age 12: a company that would get inventions out to people. The founding of Google was not a sudden event but the culmination of 25 years of preparation — a childhood designed, almost by accident, to produce someone who would try to organize the world's information. As Page told the University of Michigan graduating class in 2009: "I think it is often easier to make progress on mega-ambitious dreams. Since no one else is crazy enough to do it, you have little competition."

