Nullspace Ventures: Fund Thesis

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1 Thesis

Nullspace Ventures backs highly technical student and recently graduated founders solving foundational problems with non-trivial solutions. We invest at pre-seed and seed stages.

We are grounded in three core beliefs that define how we invest: young technical founders are underestimated, deeptech is more viable than ever, and traditional venture isn't built to serve either.

1.1 The frontier is shifting younger.

The myth of the young technical founder has long defined Silicon Valley folklore, with stories of twenty-something billionaires capturing the imagination of the tech world. But for decades, these individuals were outliers rather than indicators of a repeatable pattern.

That is no longer the case.

Through sheer numbers and technological progress, the once-in-a-decade dropout-led company has now become an annual occurrence. In the past 5 years *alone*, there has been a rapid succession of dropout-led companies – including Etched, Mercor, and Cursor – to achieve billion-dollar valuations [1].

Furthermore, many of the world's most valuable companies were founded by college-age entrepreneurs, and we believe this pattern not only persists, but is accelerating.

There are several persistent forces are driving this acceleration:

1. Access to industry-class software infrastructure such as open-source language models, cloud compute, and advanced simulation platforms are no longer limited by age or affiliation.
2. The cultural permission to build ambitious projects has moved from industry veterans to students in high school, college, and academia.
3. Top students are choosing to build instead of wait, leaving school earlier and building exceptional talent pools from day one.

We regularly encounter high school students outperforming senior engineers, undergraduates designing novel semiconductors, and PhD candidates leaving their labs to build frontier companies.

This is the new reality our fund is built to capitalize on.

[1] The founders of EtchedAI, Mercor, and Cursor at the time were all under 22 (median age: 21). EtchedAI was founded in 2022 and has since raised $\$200M+$ (estimated valuation is likely over $\$1B$). Mercor was founded in 2023 and was valued at $\$2B+$ in February 2025. Cursor was founded in 2023 and was valued at $\$9.9B$ in June 2025.

1.2 Deeptech is economically and culturally attractive.

Deeptech was once dismissed as capital-intensive and culturally unattractive. However, two trends over the past few decades have tipped it to a clear inflection point.

First, deeptech has become economically feasible in ways unthinkable just twenty years ago. The marginal cost of experimentation has dropped dramatically. In computing, Moore's Law (and now, GPU scaling) has allowed widespread access to compute-intensive software that replaces expensive physical prototyping with simulation and digital design. In biology, the cost of genomic sequencing has dropped from $\approx \$100M$ in 2001 to \$100 today, allowing even high school students to experiment with synthetic biology in makeshift basement labs. Across various disciplines, technology cost curves have compressed R&D timelines, allowing small teams to tackle once-prohibitive challenges.

Second, deeptech has experienced a cultural shift. Building complex, frontier technologies is once again seen as prestigious. First-generation companies like SpaceX, Palantir, DeepMind, and OpenAI made it aspirational to tackle hard problems again, producing a generation of technical talent now founding ambitious companies of their own. For the first time since the 1980s semiconductor and industrial lab era, working on "hard tech" is not only viable; it is prestigious.

As a result, there is an influx of founders starting deeptech companies[2] to tackle highly technical challenges in AI, semiconductors, nuclear energy, space, aerospace, biotech – all unthinkable just 30 years prior, when the mention of anything non-software repelled investors. Within just the past few years, a wave of student founders have launched deeptech ventures:[3]

- EtchedAI (2022 – founded by two undergraduate dropouts)
- Rainmaker (2023 – founded by an undergraduate dropout)
- General Cybernetics (2023 – founded by two undergraduate dropouts)
- Inversion Semi (2024 – founded by two masters students)
- Icarus Robotics (2024 – founded by an undergraduate student)

Our thesis is built on a set of core principles about deeptech companies that make it attractive to invest:

- Deeptech is getting cheaper to build as software becomes more costly to build.[4]
- Deeptech is hard, but face less competition, making it easier to monopolize a vertical.
- Deeptech is avoided by most investors, creating opportunities we can arbitrage.
- Deeptech has an easier time sourcing talent that stays for longer for cheaper.

[2] We define deeptech companies as companies that predominantly take a technical risk over a market risk. Unintuitively, this means some software companies can also be deeptech, such as Mercor or Scale AI.

[3] These examples also show that follow-on capital for deeptech is no longer a constraint. This enables the existence of deeptech-dedicated pre-seed and seed funds. More importantly, these companies will produce a new generation of deeptech-experienced founders that we seek to arbitrage from and fund.

[4] While deep tech requires upfront R&D investment, it is often less capital-intensive over the long term than software. Pure software companies must burn immense capital on sales and marketing to compete in saturated markets, whereas deep tech companies with superior technology can often achieve market leadership with far greater capital efficiency.

- Deeptech is more durable and harder to replicate once built, offering a natural moat.
- Deeptech has better access to non-dilutive funding (NSF, DARPA, NASA, etc).

1.3 The traditional software playbook is ill-suited for deeptech.

The playbook used to find enterprise SaaS founders is ill-suited for deeptech or research-driven companies. Most venture firms lack the two critical ingredients for success in this domain: authentic access to university ecosystems (especially in academia) and the technical depth to evaluate engineering roadmaps or scientific claims. Firms optimized around software metrics cannot compete effectively in this environment.

This disconnect means that capital is often misallocated. We consistently observe VCs funding founders celebrated in the press but known within student and research circles to be pursuing intractable ideas or lacking the technical rigor to succeed. This information cannot be found on a Google search, pitch deck, or LinkedIn, but is embedded within academic and research communities that remain opaque to most traditional investors. Without software metrics like LTV:CAC or churn, traditional investors cannot rely on metrics optimized for a different vertical – and inadvertently filter for salesmanship, not scientific truth.

We are built to close that gap.

Our thesis is simple: **those closest to the talent have the greatest advantage**. As technical students with backgrounds in software, hardware, and life sciences, we operate in the same environment as the founders we back. Our estimator for success is stronger because we are much closer to the ground floor of what's happening in technical circles. We understand their work, speak their language, and can accurately evaluate their abilities because we are their peers. We don't need to "find" exceptional talent – we're already part of their community.

2 Fund Partners

Austin Wu is a rising junior at Cornell studying Applied and Engineering Physics, specializing in experimental condensed matter physics. Austin spends most of his time as a researcher at Cornell in the Yasuda Lab for Quantum Nanomaterials and in the Ye Lab for Tunable Quantum Materials at Caltech. Austin also has extensive experience in MechE (robotics competitions) and ECE (computer architecture design), and in mathematics (graduate-level courses). He was also a USACO Platinum qualifier ($\approx T150$ nationwide in competitive programming) and the Founding Engineer of Deepsilicon (YCS24), where he led FPGA development.

Achyuth Vivek is a rising sophomore at UC Berkeley studying Computer Science and Applied Mathematics, with a focus in analysis. Achyuth spends most of his time as a researcher under Professor Sergey Levine (Cofounder of Physical Intelligence), where he works on improving cutting-edge RL algorithms for robotics learning and autonomous self-driving.

Achyuth's other experiences include research in fields of computational neuroscience and graph theory. Previously, Achyuth was a founding engineer for Judgment Labs, where he conducted NLP research, as well as a USACO Platinum qualifier.

Maxx Yung dropped out of the University of Pennsylvania's Bioengineering and Materials Engineering programs to start a deeptech company backed by the founders of Reddit and Splunk (acquired for $\$28B$). Maxx spent seven years conducting neuroscience and materials research at Stanford Medicine and Penn Medicine (Madl, Corder, Singh labs), with work published in Science. He is a Regeneron STS Scholar with prior experience in venture, M&A, and defense manufacturing. He is also a Foresight Fellow pursuing research in biotech and nanotech and a Senior Research Fellow at Contrary, where he authors memos on semiconductor, biotech, and quantum companies for one-off clients including Hiive and Citadel.

Caroline Zhu is a rising senior at Cornell's Dyson School of Applied Economics and Management and an Investment Partner at Dorm Room Fund, where she leads pre-seed and seed investments in student-founded startups across the full deal cycle. She's currently a Product Manager Intern at LinkSquares, a former Venture Fellow at Touchdown Ventures, and previously spent two years at Deloitte Consulting working on AI enablement. At Cornell, Caroline rebuilt Life Changing Labs, the university's flagship startup accelerator, deploying over $\$150,000$ in funding and supporting 40+ ventures. She's worked in brand strategy consulting for Fortune 500 companies since high school and has also built and launched multiple products, reaching over $10,000$ users.

Our previous investments include: Judgment Labs at Seed, Longshot Space at Seed (now at Series A), Paxi as the first check (now Seed).

3 Investment Philosophy

We invest at the earliest stages – primarily pre-seed and seed – and are open to being the first check. Our philosophy is to invest as true believers, backing a small number of deeptech startups tackling hard, high-impact problems.

Our strategy is differentiated by three core advantages: early access, peer references, and accurate technical diligence.

3.1 Sourcing deals before they exist.

Our edge lies in identifying and shaping companies long before a deck is written or a fundraise begins. Our proximity to student and research communities consistently gives us early visibility into high-potential ventures. Simply put, we get to founders first because we are friends.

We have a track record of advising top peers even as they shape their initial ideas, including Eric Mao (now YC X25), Edward Zhang (YC S25), Raghav Katta (Entrepreneur First S25),

Rayan Garg (YC S25), Deepsilicon (YC S24), and Alex Shan (Judgment Labs).

Upon starting this fund, this informal network will be formalized through our Fellowship Program, which acts as a curated talent engine (see the Fellowship section for details). By identifying and aggregating technical talent, we build relationships years before a company is formed and create a high-signal sourcing pipeline.

1. **Case Study: DeepGrove**. Our team had multiple pre-existing relationships with Edward Zhang (CEO). Austin previously knew Edward Zhang from working at the same startup, while Maxx knew Eddie from the same fellowship. Over several days, Maxx and Edward met and forecasted chip deployment, economics, and future directions, leading to Maxx's own struggles with running quantized local AI models. These conversations, along with inspiration from Austin and Edward's previous startup, led Edward to form a company to create resource-efficient 1-bit AI models. Maxx helped Eddie in securing initial grants ($\$5K$ and compute credits), and DeepGrove was accepted into YC's Summer 2025 Batch three months later.
2. **Case Study: Clado**. Eric Mao (CEO; then a Penn freshman) was recommended to talk to Maxx (then a Penn sophomore) from the Penn startup community. Over several days, Maxx worked with Eric, helping him pivot away from a file-organizer product for video editors to building in the enterprise networking space. Four months later, Clado was incorporated and accepted into YC's Spring 2025 Batch to build an AI-native people intelligence engine that resolves fragmented, adversarial data to rank talent.
3. **Case Study: Paxi**. We first connected with Paxi's founder, Raghav Katta (CEO), when Maxx and Raghav met within the same fellowship program. Recognizing Raghav's interest in building AI tools for healthcare, Maxx drew upon his own experience in the medical field to provide initial guidance on ideation. Maxx later connected Raghav to several small-office clinics for customer discovery, prompting Raghav to build an AI automation layer for EHRs for small-office clinics. Two months later, Paxi was incorporated and accepted into Entrepreneurs First Summer 2025 Batch, subsequently raising $\$250K$. Maxx was the first check in.

3.2 Peer reference checking and hiring recommendations.

We believe that at the early stage, the founder is the primary driver of success. As friends and collaborators, we have multi-year visibility into founders' trajectories; we assess slope, not snapshots.

Our proximity within student and research communities enables backchannel diligence most funds cannot access. We hear directly from trusted peers, lab partners, and collaborators, offering insight beyond what's visible in a pitch.

Just as importantly, we help founders build. Our technical peer networks allow us to source top engineering talent and connect founders. For early-stage founders, our ability to accelerate hiring is a core reason they bring us into the round.

1. **Case Study: Judgment Labs**. Austin's long-term relationship with the founders

through mutual friends allowed Austin to invest at Seed. More importantly, as evidence of our aggregated talent pool, we helped build their initial team by referring five of their first eight engineers – all USACO Platinum rated competitive programmers – directly from our peer networks. This is the level of access and value-add we bring from day one. To quote Alex Shan (CEO), "Austin was the investor who singlehandedly provided the most value for the company, above the Tier 1 firms that we took money from."

2. **Case Study: Vigil Labs**. Austin's friendship with Kole (CEO) enabled him to learn about Vigil Labs while the company was still in stealth. Austin was able to verify Kole's impressive abilities in the crypto markets through trusted friends at Stanford and MIT. After initial diligence and introducing Vigil Labs to one of their first hires, Austin secured a Seed allocation.

3.3 Accurate Technical Diligence

Our ability to diligence deep technology is an advantage that most traditional investors cannot replicate. As technical peers rather than evaluators, we engage founders in candid conversations that surface assumptions early, clarify technical roadmaps, and reveal first-principles thinking.

This technical intuition allows us to form original views and avoid hype cycles. For example, Austin's work in experimental condensed matter physics and Maxx's diligence across multiple quantum computing teams pointed us away from quantum computing startups. We believe immense hype surrounds the field, masking a lack of technical capabilities needed to achieve meaningful revenue.

By leveraging our own expertise and direct connections to university labs and professors, we are able to back real breakthroughs, not speculative science.

1. **Case Study: Fermion**. Austin had been friends with Ryan (CEO) for multiple years, giving him early visibility into Fermion's creation. Ryan proposed building software infrastructure to superlinearly scale distributed GPU networks – a major bottleneck for compute providers during model training and inference. Through repeated technical discussions on distributed systems engineering with Austin, Ryan refined the company's core thesis. We then introduced Ryan to several top-tier VC firms. In recognition of this early support, Ryan agreed to provide allocation in his pre-seed round.
2. **Case Study: Deepsilicon**. Austin met Abhinav (CEO) at a Boston networking event before Deepsilicon entered YC. He quickly recognized that while the team had deep ML expertise, they lacked experience in FPGA design for software-hardware co-design. Austin provided early technical verification and guidance on hardware implementation, which helped shape their architecture. After Deepsilicon was accepted into YC, the team invited Austin to join as a founding hardware engineer. Separately, Maxx advised Edward (Founding Engineer) and Rayan (Head of Product) on GPU economics and GTM strategy toward low-latency edge AI. Though we didn't deploy capital, our contributions directly influenced architecture and GTM, exemplifying our ability to win technical trust and build allocation leverage before formal rounds. Though we didn't

directly angel into Deepsilicon, our early involvement strongly suggests we would have received allocation had we pursued it.

4 Fund Logistics

We are targeting a $4 million Fund I, capped at $6 million. This size allows us to lead pre-seed rounds when appropriate and participate meaningfully in seed financings. Our typical check size will range from $\$50K$ to $\$250K$.

We prioritize quality over volume. We do not have quotas for the number of investments per year, but expect to make 4–8 concentrated investments annually.

We are seeking a standard GP/LP structure of 2% management fees and 20% carried interest.

Fund I will allocate 100% of capital toward initial checks, to avoid diluting focus with growth-stage considerations. The fund will be structured as a closed-end 8-year vehicle with an optional 2-year extension. We anticipate an initial 20% drawdown, followed by quarterly capital calls. We already have line of sight into 2–4 companies that align with our thesis and are actively raising.

5 Nullspace Fellowship

We believe the next generation of transformational deeptech companies will be founded by highly technical students – many of whom remain outside the traditional venture ecosystem.

The Nullspace Fellowship is our foundational mechanism for identifying, engaging, and supporting some of the most exceptional technical talent in the country.

Unlike other venture fellowships that select for prior entrepreneurial intent or investing experience, we focus exclusively on talent. Our selection process does not rely on open applications or resumes. Instead, we directly invite a handpicked cohort of deeply technical, research-oriented students. These will typically be undergraduates in fields like biology, physics, mathematics, and computer science, selected based on peer referrals, academic performance, and demonstrated technical depth.

Our inaugural cohort consists of 18 fellows from MIT, Princeton, Stanford, Caltech, Harvard, Dartmouth, UCLA, UC Berkeley, Brown, Yale, Carnegie Mellon, and the University of Michigan. (Note: We've intentionally avoided having too many fellows from certain schools – like Stanford, where most students are already plugged into the VC ecosystem, and Penn, which tends to be less focused on deeptech.)

Our tentative fellows include IMO Gold medalists, USAPHO Silver medalists, first-place winners of the Regeneron STS (the oldest and most prestigious high school science competition in the US), founders with eight-figure exits in high school, and authors of published research in top ML journals and Science (considered the best biology journal in the world).

The fellowship will directly complement our three investing philosophies:

1. Fellows who choose to build will call us first.
2. Fellows who remain in research become trusted validators.
3. Fellows will help us source new founders and hire for our portfolio.

To reflect our conviction in this strategy, we are allocating a meaningful portion of our management fees directly to funding the Fellowship, rather than partner salaries. This is a conscious short-term sacrifice to build a community whose potential will compound over time and yield superlinear returns for the fund.