

Samuel Indyk

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EDUCATION

University of Austin — B.S. Liberal Studies, Concentration in STEM

Austin, TX | Sep 2024 – Jun 2028 (expected)

Awards: Founders Scholarship; Lonsdale-Magaro Scholarship

Coursework: Analysis of Circuits, Differential Equations, Software Engineering, The Rise and Fall of Ancient Rome

Leadership: President, Austin Union Debate Society; Software & Mechanical Lead, UATX-Cavators

PUBLICATIONS

S. Gaalema, **S. Indyk**, and C. Staley, "Reduced-Mass Orbital AI Inference via Integrated Solar, Compute, and Radiator Panels," arXiv:2604.07760 [cs.DC], Apr 2026.

- Co-developed the Integrated Solar Compute Radiator (ISCR) architecture, which fuses solar cells, vapor-chamber radiators, and compute ICs into a single panel to reach ~500 W/kg specific power — roughly 5× conventional orbital designs.
- Modeled orbital thermal balance, power budget, and LLM inference throughput for a 16 MW, 16,000-panel satellite sized to a single Starship payload.

EXPERIENCE

Software Engineering Intern — The Boring Company

Bastrop, TX | Jun 2026 – Present

- Built the company's first automated network integration testing (NIT) system for TBM cameras and switches.
- Built a PowerShell agent and web app letting internal users configure TV displays without manual setup.
- Supported daily tunnel operations, ensuring reliability of the gap-sensing device.

Policy Intern — White House Office of Science and Technology Policy

Washington, DC | Jun 2025 – Aug 2025

- Contributed to executive order development by gathering data and supporting policymakers.
- Drafted and coordinated public government communications and resource offerings.
- Supported the OSTP Director with scheduling, travel, and meetings across federal and non-USG stakeholders; hosted White House visitors including foreign dignitaries.

Research Intern — AlphaX

Austin, TX | Nov 2024 – Feb 2025

- Designed robotics curricula for gt.school and Alpha High School based on research into pedagogical best practices.
- Authored a 25-page curriculum proposal and sourced cost-effective VR teaching tools.

Defense Team Intern — 8VC

Austin, TX | Dec 2024 – Jan 2025

- Analyzed business models and startup ecosystems for investment evaluation.
- Authored a quarterly report on the top 50 portfolio companies distributed to LPs.
- Ran a deep-dive research project reviewed by general partners; gained exposure to government contracting.

PROJECTS

Polytopia-Zero — Building an AlphaZero-style machine learning platform for the strategy game Polytopia. Implemented a simulated game engine and developer API, and am training a neural network via self-play with MCTS to learn joint policy and value functions.

ARES — Auction-based Registration and Enrollment System. Integrates with the university's Populi API to replace class registration with a token-based bidding market for students.

SKILLS

Programming & Data: Python, TypeScript, R, Django, TanStack, Docker, Structured Text

Engineering Tools: Inventor / Fusion 360, Onshape, ANSYS, Phoenix Contact PLC software, VFD software

Technical: Fabrication, sensor integration, control systems, web development, oscilloscope / RF