Nikola Samardzic

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EDUCATION

Massachusetts Institute of Technology — Boston, MA
Ph.D. Computer Science — Sept. 2020 – June 2024 (expected)
- Advisor: Prof. Daniel Sanchez

M.Sc. Computer Science — Sept. 2020 – May 2022

University of California, Los Angeles — Los Angeles, CA
B.Sc. Computer Science — Sept. 2016 – June 2020
- Research advisor: Prof. Jason Cong; GPA: 3.98/4.00 (Summa Cum Laude and Phi Beta Kappa)

RESEARCH CONTRIBUTIONS

- Drove the design of two accelerators for cryptographic applications that improve state-of-the-art performance by >10x.
- Drove the design and implemented a compiler that automatically translates arbitrary PyTorch models into programs that run inference *on encrypted data*, targeting both CPUs and our accelerators.
- F1, my first-author publication, received the MICRO 2021 TopPicks award, which "collects some of the most significant research papers in computer architecture based on novelty and potential for long-term impact."
- Prof. Sanchez's lab received millions of dollars of funding based on these publications.
- In undergrad, I implemented the fastest sorting accelerator in the 4-60GB range, using FPGAs; I also worked with and published on High-Bandwidth Memory (HBM) and SmartSSDs.
- For a full list of publications, please see my Google Scholar page.

WORK EXPERIENCE

- **NAND Capital (Intern, 2020):** I was the first employee in a three-person hedge fund start-up funded by Founder's Fund and Paradigm; Developed basic data pipelines for running experiments on large amounts of market data. Used the pipeline to find predictable trends in markets.
- **Goldman Sachs (Intern, 2018):** Created custom NLP model for performing a specific accounting classification task that was previously performed full time by two employees.
- **SpaceX (Intern, 2017):** Created software to automate defining and testing of all propulsion joints on SpaceX rockets; Was offered to leave school and begin full time work as a freshman.

AREAS & SKILLS

- Areas: computer architecture, computer systems, performance engineering, cryptography, FPGA, ASIC, compilers, HW/SW codesign, software engineering, ML performance.
- Skills: C++, Python, Verilog, Minispec/Bluespec, Linux, Rust.