Milan Lustig

Computer Systems Researcher

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Education

Harvard University 2025 - 2029
Computer Science Bachelor of Science

Cold Spring Harbor High School September 2021 - June 2025
4.0uw/4.29w GPA, 1590 SAT, Valedictorian, Varsity Swim Captain, FRC Robotics Co-President

Experience

Stony Brook University COMPAS Lab May 2024 - Present
Research Assistant, Simons Fellow

Full time paid Research Assistant employed by SUNY; Simons Fellow (<4% acceptance rate); led and directed project incorporating several graduate students working to develop computer systems for ML accelerators; continued collaboration with IBM researchers

University of Michigan Future of Programming Lab February 2022 - Present
Lab Member

Developed computer science education software used in multiple university courses; collaborated with graduate students on PhD-thesis projects; youngest lab member

New York University Martiniani Lab August 2023 - Sep 2024
Lab Member

Researched computational physics algorithms; studied graduate-level theoretical physics; built high performance parallel Rust simulation software for use in multiple physics research labs

Awards

Regeneron STS Top 300 Scholar Jan 2025
Society for Science

Top 300 out of 2400+ national applicants; "America's oldest and most prestigious research competition"

ISEF 3rd Place Grand Award May 2024
Society for Science

3rd Place out of 1,700 international finalists, 175,000+ global participants; solo un-sponsored compilers research (Swo Wants Options)

Presidential Scholars Semi-Finalist April 2025
President of United States

600 finalists out of 3.9 million students nationally; recognized as one of America's "most distinguished graduating seniors"

Projects

MLISA May 2024 - Present
SBU & IBM

Led the development of an MLIR/LLVM-based Torch ML compiler; modified PyTorch, MLIR, LLVM internals; designed novel Instruction Set Architecture (ISA) for ML applications

Swo Wants Options Jan 2022 - May 2024
Independent
https://github.com/green726/SWO

Researched and built a novel compiled programming language in C#; custom parser frontend; LLVM backend

EraTICKate April 2023 - August 2024
CSH HS

Founder & president of $50k+ grant-winning MIT InvenTeam; developed modern targeted tick mitigation technologies; collaborated with government officials

Publications

A Configurable Compiled Language With Integrated Transpilation December 2023
SSRN
https://dx.doi.org/10.2139/ssrn.4661607

Skills

Programming Languages
C++, Java, C#, TS/JS, C, Rust, Python, Reason, OCAML, Kotlin

Research
Compilers, Computer Architecutre, PL Theory, Computational Simulation

Tools
LLVM, MLIR, ARM, RISCV, Menhir, PyTorch, Git, LaTeX, Linux