Milan Lustig

Student Researcher

⌖ Cold Spring Harbor, NY   ☎ (908) 418-8204   @ milan@lustig.dev   🔗 https://lustig.dev/

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Experience

Stony Brook University COMPAS Lab   **May 2025 - Present**
Research Assistant
🔗 https://compas.cs.stonybrook.edu/

Full time paid Research Assistant employed by State University of New York summer 2025 in Prof. Mike Ferdman's COMPAS Lab; led project incorporating 3 graduate students; working to develop compilers for novel machine learning hardware; continued collaboration with IBM researchers

Stony Brook University COMPAS Lab   **May 2024 - May 2025**
Simons Fellow
🔗 https://www.stonybrook.edu/simons/

2024 Stony Brook University Simons Research Fellow working in Professor Mike Ferdman's Computer Architecture At Stony Brook (COMPAS) lab; collaborated with IBM researchers on creation of computer hardware and software to reduce AI energy usage; led machine learning compiler project incorporating multiple graduate students

University of Michigan Future of Programming Lab   **February 2022 - Present**
Lab Member
🔗 http://fplab.mplse.org/

First high school lab member under Professor Cyrus Omar; developed computer science education software used in multiple university courses; collaborated with graduate students on PhD-thesis projects

New York University Martiniani Lab   **August 2023 - Sep 2024**
Lab Member
🔗 https://martinianilab.org/

Developed computational physics algorithm; studied graduate-level theoretical physics with Professor Stefano Martiniani; built software for use in multiple physics research labs

Lemelson-MIT InvenTeam   **May 2023 - Present**
Team President & Founder   Cold Spring Harbor High School
🔗 https://lemelson.mit.edu/teams/cold-spring-harbor-juniorsenior-inventeam

Founded $7,500 grant-winning InvenTeam dedicated to solving local problem of tick overpopulation; presented at Town of Huntington board meetings and MIT; collaborated with Suffolk County government; won Microsoft Make What's Next Grant ($50,000)

Education

Yale University   **2025 - 2029**
Electrical Engineering and Computer Science   Bachelor of Science

Cold Spring Harbor High School   **September 2021 - June 2025**
4.0 UW/4.28 W GPA
🔗 https://www.csh.k12.ny.us/

Academic: 14 AP classes; scored 5 on every AP exam; 1590 SAT; valedictorian

Extracurricular: Co-captain of FRC robotics team; founder & president of engineering club; captain of men's varsity swimming; 1st chair trombone

Skills

Programming Languages	**Research**	**Tools**
C++, Java, C#, JS, C, Rust, Python, Reason	Compilers, Computer Architecutre, PL Theory, Computational Simulation	LLVM, MLIR, ARM, RISCV, Menhir, PyTorch, Git, LaTeX, Linux

Awards

Regeneron STS Top 300 Scholar   **Jan 2025**
Society for Science

2025 Regeneron Science Talent Search Top 300 Scholar; one of 300 students nationally chosen out of 2400+ applicants (the most in competition history) for solo project "A Configurable Compiled Programming Language With Integrated Transpilation"; first ever STS Scholar from Cold Spring Harbor High School

ISEF 3rd Place Grand Award   **May 2024**
Society for Science
🔗 https://www.societyforscience.org/press-release/regeneron-isef-2024-full-awards/

2024 International Science and Engineering Fair 3rd Place Grand Award in the Systems Software category for solo project "A Configurable Compiled Programming Language With Integrated Transpilation"; competed against 1,700 international finalists and more than 175,000 global participants

Lemelson-MIT InvenTeams Grant   **October 2023**
Lemelson-MIT
🔗 https://lemelson.mit.edu/inventeams

Founder & president of first ever $7500 grant-winning Cold Spring Harbor InvenTeam dedicated to solving tick overpopulation on Long Island

Presidential Scholars Semi-Finalist   **April 2025**
President of United States
🔗 https://www.ed.gov/grants-and-programs/recognition-programs/us-presidential-scholars-program

Selected as one of ~600 semifinalists nationally from ~3.9 million graduating seniors in the class of 2025; the Presidential Scholar award is known as "one of the Nation's highest honors for high school students"

Simons Fellowship   **May 2024**
Stony Brook University

Selected as 2024 Stony Brook University Simons Research Fellow; one of <50 students selected nationally out of 1300+ applicants (<4% acceptance rate)

National Merit Scholarship Finalist   **March 2025**
National Merit Scholarship Corporation
🔗 https://www.nationalmerit.org/s/1758/start.aspx?gid=2&pgid=61

2025 finalist in the National Merit Scholarship Competition; finalists represent the top 0.5% of students in the United States

Congressional App Challenge Winner   **Jan 2024**
United States Congress
🔗 https://www.congressionalappchallenge.us/

Winner of 2023/2024 Congressional App Challenge for district NY01

2nd Place   **March 2025**
New York State Science and Engineering Fair

2nd Place Grand Award for project "MLISA: An ISA and End-To-End Compiler for Machine Learning Acceleration"

Ellison Institute of Technology Scholars Semi-Finalist   **Oct 2024**

Semi-finalist for EIT Oxford Scholars; one of <100 semi-finalists internationally

Publications

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

Solo paper published in pre-print journal SSRN; accepted for publication in peer-reviewed journal; project entailed multiple years of self-teaching and research work to develop a novel type of programming language