

Education			
Harvard University		2025 - 2029	
Computer Science		Bachelor of Science	
Analyst, Harvard Undergraduate Capital Partners			
Courses: Theoretical Linear Algebra & Real Analysis (Math 25), Compilers (CS 1530)			
Cold Spring Harbor High School		September 2021 - June 2025	
Valedictorian, 4.0uw/4.29w GPA, 1590 SAT, FRC Robotics Co-President			
Experience			
Stony Brook University COMPAS Lab		May 2024 - Present	
Research Assistant, Simons Fellow			
Led team of graduate researchers on advanced compilers/architecture & ML acceleration research project as full time Research Assistant/Simons Fellow (paid position, <4% acceptance rate); continued collaboration with IBM researchers			
University of Michigan Future of Programming Lab		February 2022 - Present	
Lab Member			
Developed computer science education software used in in 2+ university courses (100+ students); contributed to ongoing PhD-level research in programming languages			
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; >10× speedup, enabling adoption in multiple research labs			
Awards			
Regeneron STS Top 300	ISEF 3rd Place Grand Award	US Presidential Scholars	April 2025
(Top 300 of 2400+, compilers research)	(3rd of 1700 finalists, compilers research)	(Top 600 out of 3.9 million)	
Projects			
MLISA		May 2024 - Present	
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	
Researched and built a novel compiled programming language in C#; custom parser frontend; LLVM backend			
EraTICKate		April 2023 - August 2024	
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	Research Topics	Systmes & Tools	
C++, Java, C#, TS/JS, C, Rust, Python, Reason, OCAML, Kotlin	Compilers, Computer Architecture, PL Theory, Computational Simulation	LLVM, MLIR, ARM, RISCv, Menhir, PyTorch, Git, LaTeX, Linux	