

EDUCATION

Harvard University Cambridge, MA <i>John A. Paulson School of Engineering and Applied Sciences: A.B. in Computer Science, S.M. (Concurrent Masters) in Computer Science</i> <ul style="list-style-type: none">Cumulative GPA: 3.83/4.0 Extracurricular Activities: Harvard Tech for Social Good, Harvard Undergraduate Capital Partners, Harvard Computer Society, Harvard Bhangra.Relevant Coursework: Data Structures and Algorithms, Computing Hardware, Systems Programming and Machine Organization, Linear Algebra and Vector Calculus, Linear Algebra and Real Analysis I, Discrete Mathematics.	<i>Expected May 2026</i>
South Windsor High School South Windsor, CT <ul style="list-style-type: none">Valedictorian Cumulative GPA: 4.46/4.0 SAT: 1580/1600 (Math: 800/800, EBRW: 780/800) 2022 Coca-Cola Scholar Harvard Prize Book Award2x AIME Qualifier AIME Score: 11 USA Math Olympiad (USAMO) Index: 219.5	<i>August 2018 - June 2022</i>

WORK EXPERIENCE

Harvard Programming Languages Group <i>Undergraduate Researcher</i> Cambridge, MA <ul style="list-style-type: none">Conducting research in self-verification for large language models and generative AI under Professor Nada Amin as part of the <i>Program for Research in Science and Engineering</i>.Improving theorem generation and verification using decomposition. Developed a plugin for ChatGPT to refine LLM-generated Coq proofs using verification.	<i>June 2023 - present</i>
Harvard University <i>Computer Science Teaching Assistant</i> Cambridge, MA <ul style="list-style-type: none">Grading student assignments and holding office hours for <i>COMPSCI E-20 Discrete Mathematics for Computer Science</i> under Dr. Rebecca Nesson.	<i>January 2023 - May 2023</i>
North South Foundation <i>Software Engineering Intern</i> Chicago, IL (Remote) <ul style="list-style-type: none">Developed online donations platform using React and Node.js, and implemented transaction processing using Stripe and Braintree APIs.	<i>January 2022 - June 2022</i>

EXTRACURRICULAR & LEADERSHIP EXPERIENCE

Harvard Tech for Social Good <i>Senior Software Engineer</i> <ul style="list-style-type: none">Led a team to develop web apps for City of Boston Visual Analytics and OkaySo (detailed below).	<i>September 2022 - present</i>
Harvard Undergraduate Capital Partners <i>Sourcing Analyst</i> <ul style="list-style-type: none">Sourcing early-stage startups and connecting them with prominent venture capital firms.	<i>September 2022 - present</i>
MetricMix, LLC <i>Founder and Mobile App Developer</i> <ul style="list-style-type: none">(Using Swift for iOS App Development) Developed GeoScholar, a geography quiz app; Scholar.ly, an advanced GPA calculator; Gene Xpress, a protein synthesis simulator; GSEF Official, an economics resource app; and ReadSpeak, an accent translation app.	<i>September 2018 - present</i>

PROJECTS AND CERTIFICATIONS

PaperScope AI Literature Review Platform <i>React, Express.js, Node.js, Langchain, OpenAI</i> <ul style="list-style-type: none">Platform that uses large language models (GPT-4) to streamline the literature review process for researchers by answering relevant questions and synthesizing material across multiple papers (React, Express.js, Node.js, Langchain, OpenAI).	<i>June 2023</i>
MIPS Multicycle Processor RISC Instruction Set Architecture <i>SystemVerilog, Python</i> <ul style="list-style-type: none">Designed and implemented a branch-optimized MIPS Multicycle Processor using SystemVerilog, demonstrating a deep understanding of RISC architecture.Developed Python scripts for automating the testing and validation of the processor, streamlining the debugging process and ensuring the reliability and accuracy of the design.	<i>May 2023</i>
City of Boston Visual Analytics Portal Expenditures Visualization Platform <i>React, Django, Plot.ly</i> <ul style="list-style-type: none">Led a team of 3 software engineers to create a web platform to provide visualizations and insights regarding spending in the City of Boston.Created front-end data visualizations and set up backend API requests.	<i>May 2023</i>
OkaySo Expenditures Visualization Platform <i>React, Express.js, Node.js</i> <ul style="list-style-type: none">Co-developed a web portal for OkaySo for experts to answer anonymous young adults' questions regarding identity, relationships, mental health, and more.Constructed real-time chat messaging framework (0.5-sec latency). Built backend and implemented all API endpoints for application.	<i>December 2022</i>
Table Tennis CV Table Tennis Game-Tracking Application <i>Python, OpenCV, Scikit-Learn</i> <ul style="list-style-type: none">Built a computer vision-machine learning application to track active table tennis gameplay using Python and OpenCV.Leveraged frame differentiation and elliptical Hough transform to track a moving ball in view.Trained a machine learning model using the Scikit-Learn library in Python to predict where a ball lands based on the initial return location.	<i>August 2021</i>
Pillola Automated Pill Dispenser Prototype <i>C++, Arduino, Autodesk Fusion 360</i> <ul style="list-style-type: none">Designed all dispenser parts and conducted structural analyses using Autodesk Fusion 360, meant for use in senior living facilities.Used Arduino and C++ to automate pill dispensing, scheduling, and secure fingerprint/keypad authentication.	<i>July 2021</i>
Java Decaffeinated Published Book View on Amazon	<i>October 2021</i>
The Python Starterpack Published Book View on Amazon	<i>April 2020</i>
Shortest Paths Revisited and NP-Complete Problems Stanford Online Certificate	<i>January 2021</i>
Graph Search, Shortest Paths, and Data Structures Stanford Online Certificate	<i>December 2020</i>
Greedy Algorithms, Minimum Spanning Trees, and Dynamic Programming Stanford Online Certificate	<i>December 2020</i>
Divide and Conquer, Sorting and Searching, and Randomized Algorithms Stanford Online Certificate	<i>November 2020</i>

SKILLS AND INTERESTS

Languages: English (fluent) Tamil (native) French (business proficiency)
Programming Languages and Frameworks: Python, C++, Java, JavaScript, React, Node.js, Express.js, Swift, System Verilog, Dart, Langchain, OpenAI, Django
Computer/Software: Alexa Developer Console, Autodesk Inventor, C++, Canva, Figma, Firebase, Flutter, Git, GitHub, Homebrew, HTML/CSS, LaTeX, Markdown, Matplotlib, Microsoft Office Suite, MongoDB, Notion, NumPy, Onshape, OpenCV, PyCharm, SoftCover, Visual Studio Code
Interests: Tennis Piano Chess Indian folk dance