

EDUCATION

Harvard University | Cambridge, MA

John A. Paulson School of Engineering and Applied Sciences: A.B. in Computer Science, S.M. (Concurrent Masters) in Computer Science

- 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.

Expected May 2026

South Windsor High School | South Windsor, CT

- Valedictorian | Cumulative GPA: 4.46/4.0 | SAT: 1580/1600 (Math: 800/800, EBRW: 780/800) | 2022 Coca-Cola Scholar | Harvard Prize Book Award
- 2x AIME Qualifier | AIME Score: 11 | USA Math Olympiad (USAMO) Index: 219.5

August 2018 - June 2022

WORK EXPERIENCE

Harvard Programming Languages Group | Undergraduate Researcher | Cambridge, MA

- Conducting research in self-verification for large language models and generative AI under Professor Nada Amin as part of the Program for Research in Science and Engineering.
- Improving theorem generation and verification using decomposition. Developed a plugin for ChatGPT to refine LLM-generated Coq proofs using verification.

June 2023 - present

Harvard University | Computer Science Teaching Assistant | Cambridge, MA

- Grading student assignments and holding office hours for COMPSCI E-20 Discrete Mathematics for Computer Science under Dr. Rebecca Nesson.

January 2023 - May 2023

North South Foundation | Software Engineering Intern | Chicago, IL (Remote)

- Developed online donations platform using React and Node.js, and implemented transaction processing using Stripe and Braintree APIs.
- Built an authentication system for verified donors to access the payment portal easily and securely. Created a scheduling algorithm to allow donors to schedule donations.

January 2022 - June 2022

EXTRACURRICULAR & LEADERSHIP EXPERIENCE

Harvard Tech for Social Good | Senior Software Engineer

- Led a team to develop a web app for City of Boston Visual Analytics, which provides visualizations and insights regarding city spending.
- Co-developed a web app for OkaySo, which enables users to ask questions regarding identity, relationships, and more.

September 2022 - present

Harvard Undergraduate Capital Partners | Sourcing Analyst

- Sourcing early-stage startups and connecting them with prominent venture capital firms.

September 2022 - present

MetricMix, LLC | Founder and Mobile App Developer

- (Using Swift for iOS App Development) Developed GeoScholar, a geography quiz app; Scholarly, an advanced GPA calculator; Gene Xpress, a protein synthesis simulator; GSEF Official, an economics resource app; and ReadSpeak, an accent translation app.

September 2018 - present

PROJECTS AND CERTIFICATIONS

PaperScope | AI Literature Review Platform | React, Express.js, Node.js, Langchain, OpenAI

- 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).

June 2023

City of Boston Visual Analytics Portal | Expenditures Visualization Platform | React, Django, Plot.ly

- 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.

May 2023

OkaySo | Expenditures Visualization Platform | React, Express.js, Node.js

- Co-developed a web portal for OkaySo for experts to answer questions regarding identity, relationships, mental health, and more to anonymous young adults.
- Constructed real-time chat messaging framework (0.5-sec latency). Built backend and implemented all API endpoints for application.

December 2022

Table Tennis CV | Table Tennis Game-Tracking Application | Python, OpenCV, Scikit-Learn

- 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.

August 2021

Pillola | Automated Pill Dispenser Prototype | C++, Arduino, Autodesk Fusion 360

- 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.

July 2021

Java Decaffeinated | Published Book | View on Amazon

- Published an introductory Java programming book covering types, control structures, and object-oriented programming concepts.

October 2021

The Python Starterpack | Published Book | View on Amazon

- Published an introductory Python programming book covering types, control structures, and object-oriented programming concepts.

April 2020

Shortest Paths Revisited and NP-Complete Problems | Stanford Online | Certificate

Graph Search, Shortest Paths, and Data Structures | Stanford Online | Certificate

Greedy Algorithms, Minimum Spanning Trees, and Dynamic Programming | Stanford Online | Certificate

Divide and Conquer, Sorting and Searching, and Randomized Algorithms | Stanford Online | Certificate

January 2021
December 2020
December 2020
November 2020

SKILLS AND INTERESTS

Languages: English (fluent) | Tamil (native) | French (business proficiency)

Programming Languages and Frameworks: Python, C++, Java, JavaScript, React, Node.js, Swift, Dart, Langchain, OpenAI

Computer/Software: Alexa Developer Console, Autodesk Inventor, C++, Canva, Figma, Firebase, Flutter, Git, GitHub, Homebrew, HTML/CSS, LaTeX, Markdown, Matplotlib, Microsoft Office Suite, Notion, NumPy, Onshape, OpenCV, PyCharm, SoftCover, Visual Studio Code

Interests: Tennis | Piano | Chess | Indian folk dance