

EDUCATION

<b>Harvard University</b>   Cambridge, MA	<i>Expected May 2026</i>
<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"><li>• <b>Cumulative GPA:</b> 3.83/4.0   <b>Extracurricular Activities:</b> Harvard Tech for Social Good, Harvard Undergraduate Capital Partners, Harvard Computer Society, Harvard Bhangra.</li><li>• <b>Relevant Coursework:</b> Data Structures and Algorithms, Computing Hardware, Systems Programming and Machine Organization, Linear Algebra and Vector Calculus, Linear Algebra and Real Analysis I, Discrete Mathematics.</li></ul>	
<b>South Windsor High School</b>   South Windsor, CT	<i>August 2018 - June 2022</i>
<ul style="list-style-type: none"><li>• Valedictorian   <b>Cumulative GPA:</b> 4.46/4.0   <b>SAT:</b> 1580/1600 (Math: 800/800, EBRW: 780/800)   2022 Coca-Cola Scholar   Harvard Prize Book Award</li><li>• 2x AIME Qualifier   <b>AIME Score:</b> 11   <b>USA Math Olympiad (USAMO) Index:</b> 219.5</li></ul>	

WORK EXPERIENCE

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

EXTRACURRICULAR & LEADERSHIP EXPERIENCE

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

PROJECTS AND CERTIFICATIONS

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

SKILLS AND INTERESTS

<b>Languages:</b> English (fluent)   Tamil (native)   French (business proficiency)	
<b>Programming Languages and Frameworks:</b> Python, C++, Java, JavaScript, React, Node.js, Express.js, Swift, System Verilog, Dart, Langchain, OpenAI	
<b>Computer/Software:</b> 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	
<b>Interests:</b> Tennis   Piano   Chess   Indian folk dance	