PRANAV RAMESH

EDUCATION

Harvard University | Cambridge, MA

Expected May 2026

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

- Cumulative GPA: 3.92/4.0 | Extracurricular Activities: Harvard Tech for Social Good, Harvard Undergraduate Capital Partners, Harvard Computer Society.
- Relevant Coursework: Systems Programming and Machine Organization, Linear Algebra and Vector Calculus, Linear Algebra and Real Analysis I, Discrete Mathematics.

South Windsor High School | South Windsor, CT

August 2018 - June 2022

- Valedictorian | **Cumulative GPA:** 4.46/4.0 | **SAT:** 1580/1600 (Math: 800, EBRW: 780)
- 2x AIME Qualifier | AIME Score: 11 | USA Math Olympiad (USAMO) Index: 219.5
- 2022 Coca-Cola Scholarship Recipient (selected as one of 150 out of 68,000+ high school seniors nationwide)

WORK EXPERIENCE

Harvard CS 20: Discrete Mathematics for CS | Incoming Teaching Assistant | Cambridge, MA

Starting January 2023

- Teaching Assistant for COMPSCI E-20 Discrete Mathematics for Computer Science under Dr. Rebecca Nesson.
- Grading student assignments and holding office hours to guide students in discrete math.

Art of Problem Solving | Teaching Assistant and Grader | San Diego, CA (Remote)

May 2022 - present

· Grading student assignments for computer science courses.

• Serving as a teaching assistant for Introduction to Programming with Python.

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

January 2022 - June 2022

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

Mathnasium | Math Instructor | South Windsor, CT

August 2020 - August 2022

- Developed and implemented customized learning plans and curricula for individual students.
- Taught arithmetic through calculus, trained students for the MathCounts and AMC 8/10/12 contests, and tutored for the SAT/PSAT and ACT math sections.

EXTRACURRICULAR & LEADERSHIP EXPERIENCE

Harvard Tech for Social Good | Senior Software Engineer

September 2022 - present

- Co-developed a web app for OkaySo (React & Node.js, 10,000+ lines of code). OkaySo enables users to ask questions regarding identity, relationships, and more.
- Implemented core, cache-optimized expert live chat feature for fast messaging, as well as secure login.

Harvard Undergraduate Capital Partners | Sourcing Analyst

September 2022 - present

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

CodeSavant | Founder, Author, and Programming Instructor

April 2020 - present

- Developed a computer science curriculum and taught beginner and intermediate Python programming classes nationwide, raising ~\$2,000 for COVID-related causes.
- Published Python and Java programming books on Amazon and created CodeSavant YouTube Channel (~1125 subs/250k+ views).

MetricMix, LLC | Founder and Mobile App Developer

September 2018 - present

• (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.

PROJECTS AND CERTIFICATIONS

Pillola (pranavramesh.com/projects#pillola)

July 2021

- Smart, secure pill dispenser designed for use in senior living facilities.
- Designed all dispenser parts and conducted structural analyses using Autodesk Fusion 360.
- Used Arduino and C++ to automate pill dispensing, scheduling, and secure fingerprint/keypad authentication.

Table Tennis CV (pranavramesh.com/projects#tabletenniscv)

August 2021

- Computer vision-machine learning application to track active table tennis gameplay using Python and OpenCV.
 Lowers of from a differentiation and alliptical Hough transform to isolate and track a maying hall in view.
- Leveraged frame differentiation and elliptical Hough transform to isolate and track a moving ball in view.

• Trained a machine learning model using Scikit-Learn to predict where a ball lands based on the initial return location.

The Python Starterpack (amazon.com/Python-Starterpack-Simple-Introduction/dp/B0874PCH1I/) Java Decaffeinated (amazon.com/Java-Decaffeinated-Simple-Introduction/dp/B09K5TQWKC/)

April 2020 October 2021

Shortest Paths Revisited and NP-Complete Problems Certificate (<u>pranavramesh.com/algospec1</u>)

Graph Search, Shortest Paths, and Data Structures Certificate (<u>pranavramesh.com/algospec2</u>)

Greedy Algorithms, Minimum Spanning Trees, and Dynamic Programming (pranavramesh.com/algospe

January 2021 December 2020

Greedy Algorithms, Minimum Spanning Trees, and Dynamic Programming (pranavramesh.com/algospec3) Divide and Conquer, Sorting and Searching, and Randomized Algorithms (pranavramesh.com/algospec4)

December 2020 November 2020

SKILLS AND INTERESTS

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

Programming Languages & Frameworks: Python, C++, Java, JavaScript, React, Node.js, Swift

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

Other Technical: Business Analytics, Data Science, Data Structures and Algorithms, iOS App Development, Object-Oriented Programming, Product Design, Product Engineering, Robotics, Statistical Modeling, Web Development, Web Design