

Aakash R. Kalmady

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EDUCATION

University of Maryland

B.S. in Computer Science

College Park, Maryland

Expected Graduation, May 2027

- **GPA:** 3.53/4.00
- **Related Coursework:** Data Structures and Algorithms (Java), Discrete Mathematics, Computer Systems (C, x86-64 Assembly), Linear Algebra (MATLAB), Applied Statistics and Probability, Multivariable Calculus (MATLAB).

EXPERIENCE

Booz Allen Hamilton

Full-Stack Software Engineer

College Park, Maryland

Sep 2024 – Present

- Working with a team of UMD students to develop a web app to automate the process of auditing Medicaid and CHIP claims as part of Booz Allen Hamilton's contract with the U.S. Government by web scraping policies from 50 states.
- Developing a UI designed in Figma to upload PDFs of policies, compare and annotate them, and display top five frequent keywords for each policy to streamline the auditing process using Next.js for server-side rendering, and Tailwind CSS.
- Generating keywords using Natural Language Processing (NLP) tagging, storing them alongside user-inputted fields related to policies including effective date, name, and ID in a safe PostgreSQL database through Express.js.

Climate Computing Researcher

First Year Innovation and Research Experience (FIRE)

College Park, Maryland

Jan 2024 – Present

- Managing hurricane data on the remote Derecho HPC supercomputer through the secure shell (SSH) to analyze the impacts of sea surface temperature on Hurricane Ida.
- Running simulations through the Weather Research and Forecasting Model (WRF) to simulate Hurricane Ida as if it occurred during the cold and warm proxies of 1950 and 2023 respectively.
- Developing Python scripts to analyze large-scale files on the supercomputer by using NetCDF operations on several gigabytes of data to combine, average, and generate plot differences between the simulation cases.

PROJECTS

Maryland Dhoom Website

Web Developer

Remote

Sep 2024 – Present

- Developing a website to promote and raise awareness for Maryland Dhoom, the University of premier Bollywood-Fusion competitive dance team.
- Showcasing the team's evolution and current members using Next.js, Tailwind CSS, and Node.js.

Personal Website (URL: <https://aakashkalmady.dev>)

Front-End Web Developer

Remote

Jun 2024 – Sep 2024

- Designed and developed a personal website from scratch to showcase my professional work, skills, and other hobbies by using HTML, CSS, and JavaScript, mocked-up designs using Figma.
- Integrated responsive design for viewing across devices of different sizes and 5 web browsers, managed content including photos, videos, portfolio work, socials, and a contact form.

Over-Terrain Vehicle (OTV)

Design Lead and Programmer

College Park, Maryland

Aug 2023 – Dec 2023

- Led the design of the OTV by using Autodesk Fusion 360 to develop multiple iterations of the design, 3D printed, and laser cut over 15 custom parts for efficient tasks: flame extinguishing and navigation.
- Developed C++ software to integrate Arduino and robotic subsystems, created GPS-based navigation code and control algorithms using ultrasonic sensors, and mapped mission site topography using ML with a digital vision system.

VEX Robotics (Source Code: <https://www.github.com/aakash-kalmady/SpinUp-81Y>)

Programming Lead and Designer for teams 81Y and 81H

Downingtown, Pennsylvania

Sep 2021– May 2023

- Developed C++ software and algorithms for control of robotic hardware, created ML algorithms using optical, ultrasonic, and inertial sensors for autonomous control. Tuned the PID controller for drivetrain by writing data to a .csv file and analyzed 200+ plots in Excel and simulated the controller in MATLAB.
- Design Award at the VEX World Championship (2023, Dallas, TX), Champions at the CREATE U.S. Open Championship (2023, Council Bluffs, IA), and a top 5 finish in the world for the Programming Skills challenge (2022, Dallas, TX).

SKILLS

Programming: Python, Java, JavaScript, TypeScript, C, C++, x86-64 Assembly, HTML, CSS, MATLAB, Front-End, Back-End, Full-Stack Development, Web Development

Technologies: React.js, Next.js, Node.js, Express.js PostgreSQL, Eclipse, Visual Studio Code, Figma, Git, GitHub, Unix, VIM, GDB Debugger, Autodesk Inventor, Fusion 360

General: Teamwork, Leadership, Collaborative, Analytical, Accountable, Performance Driven, Eager to Learn