Aakash R. Kalmady

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EDUCATION

University of Maryland **College Park, Maryland**
B.S. in Computer Science *Expected Graduation, 2026*

- **GPA:** 3.53/4.00
- **Related Coursework:** Data Structures and Algorithms (Java), Discrete Mathematics, Computer Systems (C, Assembly), Linear Algebra (MATLAB), Applied Statistics and Probability, Multivariable Calculus (MATLAB).
- **App Dev Club:** Studied Full-Stack Development to apply my skills to various project teams (https://appdevclub.com).

SKILLS

Programming: Python, Java, JavaScript, C, C++, Assembly, HTML, CSS, MATLAB, Front-End, Back-End, Full-Stack Development, Web Development
Technologies: React.js, Node.js, MongoDB**,** SQL, Eclipse IDE, Visual Studio Code, Git, GitHub, Unix, VIM, Figma, Autodesk Fusion 360, Inventor
General: Teamwork, Leadership, Collaborative, Analytical, Accountable, Performance Driven, Eager to Learn

EXPERIENCE

Climate Computing Researcher **College Park, Maryland**
First Year Innovation and Research Experience (FIRE) *Jan 2024 – Current*

- Managing Linux filesystems on high-performance computing system through Unix and the Secure Shell (SSH).
- Analyzing weather and climate systems to input data into programs and scripts using VIM to evaluate and interpret climate patterns.

Programming Tutor **Chester Springs, Pennsylvania**
Private *Aug 2022 – May 2023*

- Mentored middle/high school students on C++ programming concepts, created lesson plans for sessions, guided step by step to learn algorithms for control of VEX Robotics subsystems, ensured students could teach concepts back.

Bentley Systems **Exton, Pennsylvania**
Career Practicum *Jul 2022*

- Studied the application of software to design CAD projects through workshops: MicroStation and Context Capture.
- Learned how various roles collaborate in a professional environment with knowledge gathered from local and international employees from different functional areas.

PROJECTS

Maryland Dhoom Website **Virtual**
Full-Stack Developer *May 2024 – Current*

- Developing a full-stack website to promote and raise awareness for the Maryland Dhoom Fusion dance team.
- Using Node.js, React.js, JavaScript, and HTML/CSS for front-end visuals and back-end functionality to showcase the team's rich history.

Personal Website (URL: https://aakashkalmady.dev) **Virtual**
Freelance Front-End Web Developer *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 different devices and browsers, managed content including photos, videos, portfolio work, socials, and contact form.

Over-Terrain Vehicle (OTV) **College Park, Maryland**
Design Lead and Programmer *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, mapped mission site topography using ML with a digital vision system.

VEX Robotics (Source Code: https://www.github.com/aakash-kalmady/SpinUp-81Y) **Downingtown, Pennsylvania**
Programming Lead and Designer for teams 81Y and 81H *Sep 2021– May 2023*

- Developed C++ software based on VEX API and algorithms for control of robotic hardware: PID controller and odometetry, created ML algorithms using optical, ultrasonic, and inertial sensors (IMU) for autonomous control.
- Fine-tuned the PID controller by using dynamic array vectors to store data in a csv file, graphed and analyzed 200+ plots in Excel, simulated the controller in MATLAB.
- Awarded the 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).