Aakash R. Kalmady

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EDUCATION

University of Maryland — **College Park, Maryland**
B.S. in Computer Engineering — *Expected Graduation, Dec 2026*

- **GPA:** 3.53/4.00
- **Related Coursework:** Data Structures & Algorithms, Discrete Structures, Object-Oriented Programming (OOP), Multivariable Calculus, Introduction to Engineering Design

EXPERIENCE

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

- Studied the implementation of iTwin software to design CAD API SaaS projects by participating in 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.

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

- Mentored various middle/high school students on C++ programming concepts, created agendas for sessions, guided step by step to learn algorithms for control of VEX Robotics systems, ensured students can teach concepts back.

PROJECTS

VEX Robotics (GitHub: https://www.github.com/aakash-kalmady/SpinUp-81Y) — **Downingtown, Pennsylvania**
Programming Lead and Designer for teams 81Y & 81H — *Sep 2020 – May 2023*

- Developed C++ software based on VEX API and algorithms for control of robotic hardware: PID controller and odometetry, ML algorithms using optical, ultrasonic, and inertial sensors (IMU) for autonomous control of the robot.
- Fine-tuned the PID controller by using dynamic array vectors to store data in a .csv file analysis of the controller in Excel, simulated the controller in MATLAB.
- Optimized control of various robotics subsystems by using multithreading.
- Led team to achieve the Design Award at the VEX World Championship (2023, Dallas, TX), top 5 in Programming Skills (2022, Dallas, TX), and Champions at the CREATE U.S. Open Championship (2023, Council Bluffs, IA).

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 the design, 3D printed, and laser cut 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.

Maryland Dhoom Website (GitHub: https://www.github.com/riantiwari/Dhoom) — **Remote**
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 Webpage (https://aakashkalmady.dev) — **Remote**
Front-End Developer — *Jun 2024 – Current*

ACTIVITIES

Climate Computing Researcher *(FIRE) Program* — **College Park, Maryland**

- Manage Linux filesystems on high-performance computing system via cloud, analyze weather and climate systems to input parameters into programs and scripts to evaluate and interpret climate data. — *Jan 2024 - Current*

App Development Club (https://www.appdevclub.com) — **College Park, Maryland**

- Learn about and have the opportunity to develop software for real world impactful projects. — *Feb 2024 – Current*

SKILLS

Programming: Python, C++, Java, JavaScript, HTML/CSS, React.js, Node.js, Django, MongoDB, MATLAB **Tools:** Atom, Eclipse, VS Code, Git, GitHub, VIM Editor, Autodesk Fusion 360, Inventor.