

Ben Anderson

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LEADERSHIP EXPERIENCE

Computer Science Capstone

Portland, OR

Capstone Project Lead

Jan 2023 – Jun 2023

- Developed a rear-wheel-drive torque vectoring system for a Formula SAE racecar with theoretical simulations resulting in a 1% to 8% yaw rate correction depending on steering angle.
- Lead a team of 7 students in creation of differing sub-products of the torque vectoring system using agile development with weekly scrum meetings.
- Created a simulation with pre-defined power ratio values for the STM32 microcontroller, resulting in a ~75% reduction in development time by enabling quick power ratio calculations based on user input rather than using on-board movement sensors in pursuit of a closed-loop system.

WORK & PROJECT EXPERIENCE

Viking Motorsports

Portland, OR

Team Member

Nov 2021 – Jun 2023

- Built a functional traction control system using STM32F446RE Microcontrollers.
 - Collaborated with electrical engineers to incorporate 200 pulse per revolution wheel encoders to calculate car velocity from frequency.
 - Cooperated with software engineers to transfer data using protocols such as I2C, USART, and CAN.
- Developed a Python simulation for the 2022 E274 electric Formula SAE car to incorporate PID traction control.
 - Used the Pacejka tire model in combination with mathematical constants and characteristics of the car to determine an ~8% optimal slip ratio for asphalt and concrete surface types.
- Diagnosed and resolved complex car complications leading up to the FSAE competition, enabling the team to achieve optimal performance and secure 29th place out of 58 participating teams.

Athey Creek Christian Fellowship

Oregon City, OR

IT Specialist

Dec 2023 – Current

- Orchestrated the implementation of a Python script and webhooks to streamline access to camera views for the Security team; theoretically reducing response time to security incidents by roughly 25% through real-time monitoring and alerts from facial recognition and license plate recognition software.
- Facilitated staff computer deployments, oversaw version control execution, and upkeep Athey's technology infrastructure reliability with monitoring tools to give at least 99% uptime when it's within my control.

EDUCATION

Portland State University

Portland, OR

Bachelor of Science – Computer Science

Sept 2020 – Aug 2023

- Involved in Formula SAE at Viking Motorsports (*see above*).
- Computer Science became an easy fit following my personal work in experimentation of electronics and software along with my involvement in philosophical ideas.

Clackamas Community College

Oregon City, OR

Bachelor of Science Transfer – Computer Science Transfer

Sept 2018 – Jun 2020

- Began pursuing Mechanical Engineering while at Clackamas before transitioning into Computer Science to develop further my curiosity in a field I have always had passion for.

SKILLS & INTERESTS

Skills: C++ | C | Java | Python | Rust | Git | Linux | CI/CD | Embedded Software | Scrum | Agile Methodologies | Unit Testing | Eclipse | Communication Protocols |

Work Interests: Embedded software development, systems integration, and deployment.

Personal Interests: Building cars using embedded systems, overlanding, photography, skiing, tennis, mountain biking.