ERIC DAVID VETHA

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EDUCATION

University of California, Santa Cruz, MS. Santa Cruz, CA
Electrical and Computer Engineering 2024 - Present

- Concentration in Robotics, Control, and Cyberphysical Systems
- **Coursework:** Models of Robotic Manipulation, Linear Dynamical Systems, Convex Optimization, Small-Scale UAV Theory and Practice

University of California, Santa Cruz, BS. Santa Cruz, CA
Robotics Engineering 2020 - 2024

- GPA: 3.81, Cum Laude Honors
- **Coursework:** Data Structures and Algorithms, Embedded Systems (C), Signals and Systems, Mechatronics, Microcontroller System Design, Feedback Control Systems, Sensors and Sensing Technology, Models of Robotic Manipulation

HONORS

IEEE Eta Kappa Nu (HKN)
Carbon Fund recipient
EFI Frontiers Fellowship recipient
Graduate Student Researcher funding, University of California, Santa Cruz

PROFESSIONAL EXPERIENCE

Graduate Student Researcher Santa Cruz, CA
University of California, Santa Cruz — jLab in Smart Sensing June 2024 - Present

- Developing a low-cost in-ground soil moisture sensing system using custom PCB RF components.
- Creating Ultrawideband-based RF sensing systems with advanced signal processing methods.
- Developing real-time sensing systems on a Linux platform.

Teaching Assistant Santa Cruz, CA
University of California, Santa Cruz January 2025 - March 2025

- Assisting students in developing embedded projects using various sensor technologies, including ping sensors, IMUs, and resistive sensors.
- Tutoring students on fundamental issues in sensing of temperature, motion, sound, light, position, etc.

Undergraduate Student Researcher Santa Cruz, CA
University of California, Santa Cruz — jLab in Smart Sensing March 2023 - August 2024

- Developed a low-cost in-ground soil moisture sensing system using ultrawideband radar and backscatter tags for sustainable agriculture.
- Designed a sophisticated automated peak detection algorithm, streamlining data processing.
- Conducted research in a laboratory setting, contributing to advancements in agricultural technology through hands-on experimentation.

SKILLS

Languages: MATLAB (Proficient), C (Proficient), ROS (Experienced), Python (Experienced), Linux (Experienced), C++ (Moderately Experienced), BASH/Shell Scripting (Moderately Experienced), Java (Prior Experience).

Technologies: Experience with embedded C programming, simulation environments (Gazebo and Webots), creating imitation learning models and control systems, PCB design, RF Hardware

General: Capable of working well both individually and in groups; Comfortable with technical writing.