

Daniel Krygsman

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Technical Skills

Programming Languages: C/C++, Python, Verilog

Software: Matlab, Simulink, LTSpice, V-REP, CAD, and various IDEs

Technical Interests: Design and implementation of embedded systems to create efficient and responsive systems primarily related to control and robotics.

Education

University of California Santa Cruz

Santa Cruz, CA

B.S. Electrical Engineering, Electronics/Optics. GPA 3.5

June 2024

Relevant Coursework: Specialized in Embedded Systems

Experience

UCSC Teodorescu Lab

Santa Cruz, CA

Undergraduate Researcher

June 2023 – October 2023

- Creation of a calcium imaging microscope made entirely of non-toxic 3D printed components for use inside of an incubator with samples.
- Samples consisted of lab-grown cerebral organoids measuring neuron activation.
- Work included working with optical lenses, designing a condenser light bracket using optical calculations, implementing iterative designs on lab-provided equipment/material, and assisting with the samples during experiments.

UCSC ECE Department

Santa Cruz, CA

CSE 100 Logic Design Tutor

April 2023 – June 2023

- Tutor under Prof. Martine Schlag for CSE 100's Lab.
- Lab assignments included coding an FPGA development board to create modular hardware components ending with a fully functioning VGA-displayed game.
- Lab work done on the Basys FPGA development board and Vivado IDE.
- Responsibilities included leading lab sections, assisting with understanding conceptual hardware principles, syntax correction, and debugging.

Projects

Beverage Service Robot

Santa Cruz, CA

Software Architecture Lead

September 2023 – June 2024

- ROS2 controlled autonomous robot performing SLAM and navigation for dynamic environments.
- Responsibilities included setting up ROS2 software architecture on hardware, designing motor control system, and running software to perform localization and mapping for navigation and obstacle avoidance via the NAV2 stack.
- Collaborative project in a team of four utilizing project management tools (Jira, Trello, Gantt chart) and weekly scrum meetings to execute tasks and reach project goals.

Daniel's Works

Santa Cruz, CA

Developer

Present

- React-based Next.js online portfolio providing detailed descriptions and supplemental documents of projects.
- danielsworks.com