Rafael Delwart

Robotics Engineer

About Me

I am a dedicated and hardworking fourth-year Robotics Engineering student at the University of California, Santa Cruz. My passion for robotics is showcased not only through my rigorous academic pursuits but also in the personal projects I have been undertaking in my spare time. I have hands-on experience with microelectronics, I have built many small breadboard projects for school, ranging from simple amplifiers to variable power supplies, I also have experience programming small Arduino boards and using off the shelf sensors to drive motors and and turn on relays. I also have hands-on experience programming and simulating different languages from Verilog to C on a variety of different industry software programs. Being a quick learner, I've gained hands-on experience in diverse aspects of robotics, ranging from coding and electrical systems to 3D modeling.

Most Relevant Courses

CSE 100/100L: Logic Design (A-)

CSE 101: Introduction to Data Structures and Algorithms (B)

CSE 107: Probability and Statistics for Engineers (B-)

CSE 12: Computer Systems and Assembly Language and Lab (A)

CSE 16: Applied Discrete Mathematics (B)

CSE 20: Beginning Programming in Python (B)

CSE 30: Programming Abstractions: Python (B)

ECE 9: Statics and Mechanics of Materials (B)

ECE 10: Fundamentals of Robot Kinematics and Dynamics (A+)

ECE 13: Computer Systems and C Programming (A-)

ECE 101/101L: Introduction to Electronic Circuits and Associated Lab (B+) Lab:(A)

ECE 103/103L: Signals and Systems and Associated Lab (A+) Lab:(A)

ECE 171/171L: Analog Electronics and Associated Lab (A-) Lab:(A-)

MATH 19A: Calculus for Science, Engineering, and Mathematics (B+)

MATH 19B: Calculus for Science, Engineering, and Mathematics (B)

MATH 21: Linear Algebra (A)

MATH 23A: Vector Calculus (B)

PHYS 5A/5L: Introduction to Physics I and Associated Lab (B+) Lab:(A)

PHYS 5C/5N: Introduction to Physics III and Associated Lab (B+) Lab:(A)

AM 20: Mathematical Methods for Engineers II (A-)

Projected Courses for 2023-2024 Academic Year:

ECE 121/121L: Microcontroller System Design (TBD) Lab:(TBD)

ECE 167/167L: Sensing and Sensor Technologies (TBD) Lab:(TBD)

ECE 118: Introduction to Mechatronics (TBD)

Skills

Fluent in French

Programming Languages: Fluent in Python, C, C++, and MatLab. Proficient in Assembly Language.

Mathematics & Physics: Strong background in both areas, enabling a deep understanding of complex engineering concepts.

Systems Modeling: Proficient with kinematic modeling and dynamics of systems.

Electrical & Control Systems: Strong understanding of circuits and circuit design, as well as a basic understanding of filter design.

Personal Projects: Experience in coding Arduinos, building electrical systems and circuits, writing python scripts, and 3D modeling and printing.

Education

University of California, Santa Cruz (UCSC) - *Robotics Engineering with a Minor in Electrical Engineering*

September 2020 - June 2025

Reference

Zouheir Rezki, Professor at the University of California Santa Cruz, *zrezki@ucsc.edu*

132 DONNA CT, SANTA CRUZ, CALIFORNIA, 95060 +1(415)802-5537, RADELWART@GMAIL.COM