BAILEY SAUTER

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EDUCATION

Oregon State University — September 2018 - June 2022
B.S. Electrical and Computer Engineering, Computer Science — 3.95 GPA

Relevant Coursework: CMOS Circuits, Digital Logic Design, Power Electronics, Transmision Lines, Applied Robotics, Microcontroller System Design, Computer Architecture, Data Structures, Algorithms, Operating Systems, Networks

WORK EXPERIENCE

Electrical Engineering Intern — May 2021 - August 2021
Tektronix

- Developed an app in C++ for oscilloscope hardware emulation based on desired specifications from other teams, intended for use internally & by millions of customers.
- Wrote Python scripts for motherboard performance benchmarking & used results to make recommendations regarding future products to upper-level management.
- Learned & implemented principles of test-driven development & Agile.

Power Electronics Research Assistant — June 2020 - Present
Oregon State Energy Systems Research Lab

- Designed, simulated, built & debugged high-efficiency, high-power DC-DC & DC-AC converters with applications in renewable energy. Included designing & analyzing PCB schematics & board layouts.
- Worked with a team of PhD students to research & implement max power point tracking
- Maintained relationships with suppliers & purchased $10,000+ of dollars of lab equipment.

Head Undergraduate Teaching Assistant — December 2018 - Present
Oregon State Department of Electrical Engineering & Computer Science

- Hired & scheduled all undergraduate TAs for entry-level engineering course.
- Met with professors weekly to coordinate & improve the teaching of the course, the assignments, labs, & exams.
- Taught labs of 20+ multidisciplinary students every week, held office hours, graded assignments, proctored exams & taught review sessions for 250+ students.

Artificial Intelligence Project Assistant — June 2020 - September 2020
Oregon State Artificial Intelligence & Robotics Research Lab

- Annotated 100+ videos & 1000+ images to train machine learning model.
- Reviewed & improved other students' work.

TECHNICAL SKILLS

Industry Tools
Eagle, Simulink, LTSpice, Git, Visual Studio, VS, Unix, VS Studio, Pycharm, ModelSim, Spice

Programming Languages
C++, C, Python, MATLAB, System Verilog

SELECTED ENGINEERING PROJECTS

Solar Powered HVAC System - Publication for ECCE Conference 2021

- Coauthored paper, "Control Architectures of Solar-Powered HVAC Systems: A DC-DC Converter's Perspective" which was accepted & published by the ECCE 2021 global energy conference.

SCARA Drawing Arm

- Designed a custom PCB and wrote C firmware for a 3-axis robotic arm with SCARA topology.

Force Sensitive Insoles - OSU Sports Engineering Club — September 2018 - June 2019

- Led year-long club project. Designed, prototyped & wrote the C code for a shoe insole which measures & graphs user's foot motion on 2 axes using 3 force-sensitive resistors. Gave 5 minute product pitch at a startup competition.