

BAILEY SAUTER

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EDUCATION

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

Relevant Upper-Division Coursework: Algorithms, Data Structures, Operating Systems, C/C++, Digital Logic Design, Microcontroller System Design, Computer Architecture, Applied Robotics, Intro to AI, Linear Algebra, Networks

WORK EXPERIENCE

Software 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 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 algorithms for solar panels.
- 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

- Collaborated on a research project training a computer vision model to identify psychological traits in videos.
- Annotated 100+ videos & 1000+ images to train machine learning model.
- Reviewed & improved other students' work.

TECHNICAL SKILLS

Languages

C++, C, Python, MATLAB, System Verilog

Developer Tools

Git, Visual Studio, VS, Unix, VS Studio, Pycharm, ModelSim

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.

Waveform Compression Algorithm - Senior Capstone Project with Tektronix

- Researched, coded, optimized & analyzed a C++ compression algorithm for waveforms from remote oscilloscopes.

SCARA Drawing Arm

- Wrote & tested all the C firmware for a 3-axis robotic arm with SCARA topology.