Sam Felsted

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Education

Oregon State University September 2023 – June 2027 (Expected)
B.S. in Electrical and Computer Engineering Corvallis, OR
GPA: 3.77

Experience

Intern November 2023 – Present
College of Earth, Ocean, and Atmospheric Sciences Corvallis, OR

- Developed and integrated a custom GUI client for autonomous aquatic drones in an previously established system
- Programmed a custom winch box using CircuitPython and Adafruit components, demonstrating hardware-software integration.
- Managed multiple projects while maintaining academic responsibilities.

Crew Member June 2023 - Present
Killer Burger West Linn, OR

- Led team operations, ensuring exceptional customer service and smooth workflow during peak hours.
- Optimized resource allocation under high-pressure conditions, maintaining efficiency and quality.

Intern June 2022 – August 2022
Micro Systems Engineering, Inc Lake Oswego, OR

- Designed a machine learning model to detect Atrial Fibrillation with 90% accuracy using Python, Keras, and ECG datasets, without any previous cardiovascular knowledge
- Developed and trained the model independently, contributing to medical device innovation.
- Leveraged Physionet data and visualization techniques to validate model accuracy.

Technical Skills

Languages: C/C++, Python, Java, JavaScript, MATLAB, TypeScript
Frameworks: TensorFlow, Keras, NumPy, CircuitPython, JavaFX, Node.js, OpenCV, Flask, Physionet WFDB, React, LaTex
Tools: Quartus, COMSOL, ModelSim, Git/GitHub, Linux, Excel, JetBrains IDEs, KiCad

Projects

Single-Bit Serial Transmission | *ECE 271, FPGA, SystemVerilog* October 2024

- Designed and implemented a single-bit serial transmission architecture on an FPGA.
- Used a state machine to manage bit selection and transmission.

FRC Software lead | *Leadership, Programming, Robotics* November 2022 - June 2023

- Managed 10 student programmers to write robotics code using Git for project management
- Effectively used PID loops, Feedforward, and other control theory principles for robotics applications
- Worked effectively as a leader to solve problems in a high stress environment

Extracurricular Activities

Acacia Fraternity Executive Dean | *Leadership and Academic Success*

- Effectively employed propaganda to maintain the top GPA among chapters with over 50 members.
- Developed an automated grade tracking database in Excel.
- Contributed 10+ hours of community service per term with 2 hours at Red Cross blood drives.

Awards

- Eagle Scout