Luxi (Lucy) Zhu
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Personal Profile

- A self-motivated plucky and proactive girl who always strives for excellence with professional previous work experience as a collaborative team member.

Education

Rice University, TX | August 2022 – Present
Master of Electrical and Computer Engineering
- Specialization: Computer Engineering
- Core Coursework: Computer Systems Architecture, Mobile and Embedded System, Advanced VLSI Design

University of Washington, WA
Bachelor of Science in Electrical Engineering
- Certificate (Minor): Mathematics
- Honors: President's list, Dean's list
- Core Coursework: Power Electronics, Power Systems, Electronic Systems, Embedded systems, Signal Processing, Image Processing, Control Systems

Work Experience

University of Washington, WA
EE & Math Tutor
- Work independently in the EE laboratories and collaboratively in the QSC (quantitative skill center) to assist EE and Math students with project design, exam review, homework assignments, and other tasks associated with EE or Math classes

EE & Math TA/Grader
- Advice testing and digital circuit debugging techniques to students in the labs
- Assist course instructor to make the students quickly grasp the use of essential software packages such as Matlab, PowerWorld, Quartus, PET, etc.

Project Experience

Elcano Autonomous Self-Driving Vehicle Project
Worked as team scrum master and quickly developed a platform for a low-cost autonomous vehicle with the goal of lowering the barrier to replace manually driven vehicles with efficient self-driving cars, built around open-source hardware and software.
- Refactoring existing software and hardware implementations
- Design and solder several power-on circuit boards to handle emergency stop and protect e-bike controller
- Replace batteries with well-organized power converter box containing dc-dc converters and power-on board
- Calculates actuator outputs using PID control based on input directives and measured state

Cyber War
- Developed a button pressing game against a computer opponent using Quartus to write SystemVerilog code and program to FPGA board
- Mitigated the difficulty of adjusting the Artificial Intelligent player's speed by optimizing switches on the DE1_SoC board
- Developed an effective scorekeeper for player and computer

Motion Tracking Device
- Implemented a prototype wearable IMU (based on Arduino 101) with a coin cell battery to realize low power and low-cost features which can measure the human limb motion acceleration and estimate the velocity and displacement in real-time
- Used Eagle CAD to design and create parts library for schematic and PCB
- Made the PC act as a server, providing access to the information received from the measurement unit via any modern web browser