

Ryan Hyun-su Lee

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EDUCATION

University of Washington (Seattle, WA)

2022 – Present

- Major in Electrical and Computer Engineering, 2026
- Coursework: DC, AC Circuit Analysis, Signal Processing, Data Structures, Algorithms, Intro AI, Differential Equations, Linear Algebra, Multivariable Calculus. Spring: Digital Circuits, Devices

3.99 GPA

SKILLS

- Leadership – Website Coding Team Lead, Robotics sub-Team Lead
- Programming – Java, Python, C/C++, HTML/CSS/JS w/React.js, Sanity.io, Arduino, Git
- PCB Design – Altium, Eagle, Proteus; and Simulation – LTSpice
- CAD – 3D in Solidworks, Fusion 360, Onshape; and 3d Printing and Documentation

EXPERIENCE

Electronics Hardware Member, *Husky Robotics (University of Washington)*

Sept 2023 – Present

- Work with multiple sub teams to build a Mars rover for university competition
- Developing a PCB motor controller for brushless DC motors
- Used Altium to design schematic and layout, the manufactured motor controller PCB
- PCB inc. MOSFETs, current sensing, communications, and 4 layers via-stitched for 100W motor

Undergraduate Research, *SMARTS Lab (University of Washington)*

Sept 2023 – Present

- Investigating automated anomaly detection, comparing performance across different situations
- Using python to process images and train machine learning model for anomaly detection
- Building small robot to navigate new spaces and do real-time detection, operating on ROS

Engineering Intern, *EOSpace*

Summer 2023

- Integrated multiple control devices into efficient quad-controller with reduced noise
 - Goal to update controller components, reduce noise and reduce required connectors
 - Prototyped housing and internal PCB designs using Solidworks and Altium
 - Documented CAD changes, PCB updates, and wiring changes, as well as new use directions
- Coded controller and modified housing to create CNC control panel with e-stop and quick start

Coding Team Project Lead, *Dubvelopers, (University of Washington)*

Jan – June 2023

- Built a responsive website for the UW Muslim Student Association, with a dozen pages
- Project Lead for the 4-member coding team, responsible for coordination and planning
 - Used React.js for development and Sanity.io for content management

Engineering Intern, *Cadence Neuroscience*

2021 – 2022

- Mechanical design and testing for projects related to implantable neurostimulator
 - Researched standards, designed/prototyped fixtures for MRI safety testing
 - Designed a custom surgical tool for implanting neurostimulation electrodes
 - Designed and built a modular system for implantable electrode testing

Control Systems Lead, *Saints Robotics (Interlake High School)*

2018 – 2022

- FIRST Robotic Competition Team (FRC) Annual competition building 150lb robot
- Lead, Control Systems sub-team, 2021-2022
 - Responsible for wiring, sensors, motors, budget, and competition repairs

Interests – Football, Board Games, and Baby Yoda
