# Carter Boyles

*https://boylecar.github.io* | 3353 Lawrence St SE Salem OR 97302 | (503) 559-8722 | boylecar@oregonstate.edu

## Education

**Oregon State University | GPA: 4.0 |**      **| Corvallis, OR |** *Sep. 2022 – Present |*

BS Electrical and Computer Engineering      *| Expected Graduation: Jun. 2025 |*

## Engineering Clubs

**High Altitude Liquid Engine Team (AIAA)**      **| Corvallis, OR |** *Sep. 2022 – Present |*

· Help design and implement a flight computer on a PCB for a 2-stage high-altitude rocket
· Design the computer to navigate with a GPS and IMU, control stage separation, and telemetry communication systems

**Solar Plane Team (AIAA)**      **| Corvallis, OR |** *Jan. 2023 – Present |*

· Assist in the design and production of an autonomous, solar-powered plane
· Test the connection and internal resistivity of solar panels
· Use Maximum Power Point Tracking (MPPT) to maximize power during flight

**Global Formula Racing**      **| Corvallis, OR |** *Sep. 2022 – Present |*

· 3D modeling with CAD software (NX) to create parts to test and optimize battery cell connection
· Production of physical models with machining, tolerance of .005 in.

## Experience

**2023 Weekly Projects**      *| January 2023 – Present |*

· Every week since January 2023, I have built a new engineering project every single week.
· Projects and progress tracked at *https://boylecar.github.io*, a website that I programmed myself.
· Projects include PCB design, 8-bit computer (PCB), Automatic Watch Winder, Assembly Language w/ microcontroller, C/C++ programs, IR Remote Decoder, 3D Modeling/Printing

**FPGA Projects**      *| January 2023 – Present |*

· Extensive experience with FPGA using SystemVerilog HDL for personal and class projects including an IR remote decoder, clock, VGA display driver

## Knowledge and Skills

· FPGA, SystemVerilog, HDL
· Proficient in: Python, C, C++, HTML, CSS, JavaScript, Matlab, Assembly Language
· CAD modeling and 3D printing software

· PCB design, digital circuit design, soldering
· Machines/tools: milling machine, band saw, table saw, miter saw, jointer, planer, sander, router, lathe