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*** |

Experience

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 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.

Personal Projects

Automatic Watch Winder | ***January 2023*** |

- Design and create a custom circuit and PCB including a PIC microcontroller that activates a stepper motor to rotate and wind mechanical watches over time.
- Program microcontroller with Assembly Language, C/C++
- Breadboard, circuit design, PCB design, soldering.

Transformer Efficiency Research Project | ***February 2022*** |

- Build transformers with iron toroid ferrite core
- Use multimeter/oscilloscope to observe the effects of temperature, loops of transformer, and loop ratio on efficiency and power output of transformers.

Project Portfolio Website – *https://boylecar.github.io* | ***January 2023*** |

- Build a website from scratch with HTML and CSS to display my resume and project portfolio
- Track my growth as engineer through planning, process, and reflection of my projects.

Knowledge and Skills

- Proficient in: Python, C, C++, HTML, CSS, JavaScript, Matlab, Assembly Language
- CAD modeling and 3D printing software
- Circuit design, PCB Design, soldering
- Machines/tools: milling machine, band saw, table saw, miter saw, jointer, planer, sander, router, lathe
- Multimeter, oscilloscope, power sources