Seth Richards

linkedin.com/in/seth-richards/

Summary of Qualifications and Skills

· Seeking a deeper understanding of electric drives to contribute to design work to fight climate change

· Passionate about power systems, electric drives, controls, and renewable energy

· Ability to work autonomously on multiple projects with little direction and meet deadlines

· Experienced in technical communication in a professional environment

· Skills: (Expert – Word, Excel, PowerPoint) (Intermediate – Python, MATLAB, Java, HTML, CSS, JavaScript, AutoCAD Civil 3D and Inventor, soldering, oscilloscopes, assorted hand tools, PLECs, PLCs, LTspice) (Beginner – Altium, Multisim, C, Arduino, Ladder Logic, SQL)

Education

University of Washington | Seattle, WA   **Graduated: June 2021**

Bachelor of Science, Electrical Engineering, GPA: 3.69

Concentration: Power Electronics and Drives

· Related coursework: Electric Drives, Power Electronics Controls, Intro to Embedded Processing, Electric Energy Distribution, Power System Analysis, Power Electronics Design, Java Programming II, Statistics, Advanced Technical Communication

Relevant Experience

Electric Drive Calibration Engineer | General Motors| Detroit, MI   **July 2021 - Present**

· Performing inverter check out calibration tests on an inductive load

· Overhauling automatic motor calibration test scripts in MATLAB to function with specific conditions and previously processed data

Undergraduate Research Assistant | R.E.A. Lab| Seattle, WA   **October 2020 – January 2021**

· Researched a vehicle grid integration solution for a microgrid project

· Designed an optimization problem for EV charging from renewables in Python/MATLAB

Automation Engineering Intern | Shell Oil Company | Houston, TX   **June 2020 – August 2020**

· Administered beta-tests of virtual machines and found/implemented fixes for field deployment

· Learned about PLC hardware, standards, protocols, link to SCADA, and ladder logic programming (with RS Logix Studio 5000) related to implementing control strategies

· Configured CPA-SR programmable protocol converter to format data to TCAP protocol for SCADA interface

Undergraduate Research Assistant | Orsborn Lab | Seattle, WA   **March 2019 – May 2020**

· Transformed legacy MATLAB code into Python equivalent for Brain-Computer Interface signal processing

· Performed data analysis on neural frequencies using transformations and statistics

· Coordinated code changes and updates through GitHub

Senior Capstone Project

Electric Bike PCB for Power Electronics and Control   **April 2021 – June 2021**

· Guided a team designing a PCB in Altium to convert a 24V DC input to a 3Φ 48V output, including creating and coding closed loop voltage and current control to power an electric motor

· Created simulations of the converter and "hardware in the loop" for use with the DSP and C code