JAMES MATTHEW EWING

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CAREER OBJECTIVE

To fulfill my strong desire to work for a company that allows me to exercise my engineering and professional talent to solve meaningful problems through the advancement of technology.

EXPERIENCE

Global Formula Racing September 2022 - Present
ePowertrain Team Member *Club Member*

Formula Student team for both Oregon State University and Baden-Wuerttemberg Cooperative State University (DHBW).

- Compiled list of alternative Power MOSFETs for Inverter Hex Bridge
- Benchmarked new MOSFETs to compare against current MOSFET selection
- Measured switching Power Efficiency for MOSFETs
- Evaluated rise and fall times for MOSFETs

Daimler Truck North America June 2023 - December 2023
PowerNet Validation Engineer *Intern*

- Developed Full stack Python application to implement Advanced Control of AC Motor
- Improved Model-Based Controls (MiL) validation for Power Distribution Module using MATLAB
- Contributed to Vector CANoe Test Case Automation Development using CAPL language
- Functional Vehicle Testing for HV charging and Quiescent Current drain following V-Model

Daimler Truck North America March 2022 - September 2022
ADAS Mechatronics Engineer *Intern*

- Designed Test Bench for ADAS safety systems of CEEAce and CEEA+ Architecture Trucks
- Adapted Vector CANoe Simulations to enable Truck Software Testing in Office
- Created Documentation for Current and Next Generation Truck Wire Harnesses

Garmin June 2021 - September 2021
Electrical Design Engineer *Intern*

- Developed Breakout PCB from scratch for Bench Validation
- Validated Power Supply for New Architecture design
- Generated Power Supply Rejection Ratio reports

TECHNICAL STRENGTHS

Modeling and Analysis	Altium Designer, KiCad, Simulink, Autodesk Inventor, Solidworks
Software & Tools	Python, MATLAB, C/C++, Vector Tools, AVR Assembly, Allen Bradley PLC
Testing	Oscilloscope, Hand Soldering, Reflow Oven, Electronic DC Load, Signal Generator

EDUCATION

Oregon State University, Corvallis *September 2019 - Present*
Electrical and Computer Engineering Major, 3.83 GPA

EXTRA-CURRICULAR

Cortava April 2023 - Present
Electrical Design Engineer *Part Time*

- Developed embedded code for V2 ESP32 micro-controller in Arduino IDE
- Assembled and validated PCBs
- Contributed to digital V2 circuit design using Altium Designer and KiCAD 7.0

Oregon State University Robotics Club September 2019 - January 2023
President, Electrical Design, Alumni Coordinator *Club Member*

Robotics team for Oregon State University including Mars Rover, Underwater, and Drone Racing subteams.

- Led club through the Pandemic and helped increase membership to over 300 members
- Designed Power Distribution board for Underwater Team in Circuit Maker
- Contributed to Transceiver board design for Mars Rover Team in KiCAD

ACADEMIC ACHIEVEMENTS

Theodore Ritter Scholarship, September 2023
Waldo-Cummings Outstanding Student Award, June 2022
Undergraduate Research Fellow Designation, December 2021
Richard Earnhart Award, August 2021
Top 10 Finalist for EECS Sophomore of the Year, June 2021
Garmin Scholar Award, October 2020
URSA Engage Award, December 2019