JOHN WEBSTER

B.A.SC. MECHATRONICS ENGINEERING
UNIVERSITY OF WATERLOO CLASS OF 2020

WHAT SETS ME APART

I have an intrinsic drive to use my career to better the world in big ways. When I go to work, I want to know that what I do each day will benefit all of humanity. I believe that I can bring change to the world.

TECHNICAL SKILLS

HARDWARE SKILLS

MICROCONTROLLERS
LOGIC LEVEL CIRCUITRY
SCHEMATIC CAPTURE
SOLDERING
CABLING
LTSPICE

MECHANICAL SKILLS

RAPID PROTOTYPING
SOLIDWORKS
AUTOCAD
ANSYS FLUENT
POWER TOOLS
CNC MACHINING
THERMAL DESIGN

SOFTWARE SKILLS

C, C++, PYTHON
MATLAB, MODELICA
PLC LADDER LOGIC
ECLIPSE, ARDUINO
FREERTOS
GIT

EDUCATION

UNIVERSITY OF WATERLOO
SEP 2015 - APR 2020
UNIVERSITY OF QUEENSLAND
STUDY ABROAD
FEB 2018 - JUN 2018

ACTIVITIES

MIDNIGHT SUN SOLAR CAR TEAM
UW MINI BAJA SAE TEAM
BOARD SPORTS & CONSTRUCTION
MUSIC - PIANO, SAXOPHONE
PHOTOGRAPHY
FILMMAKING
ICE HOCKEY

PROFESSIONAL EXPERIENCE

System Test Engineering Intern at Tesla, Energy Products
Palo Alto, USA | May 2019 - Aug 2019
- Independently completed full test sequences using various tools such as CANape, creating user-friendly GUIs and analyzing product performance

Research Assistant at Hamburg University of Technology
Hamburg, Germany | Jul 2018 - Dec 2018
- Created a model electrolyzer in Modelica with modular physics
- Designed an automated pressure-drop measuring rig with LabView DAQ

Hardware Engineer at Bendix Commercial Vehicle Systems LLC.
Elyria, USA | Sep 2017 - Jan 2018
- Implemented manufacturing improvements using Solidworks and designed circuitry for a temperature controlled camera housing
- Conducted HALT tests on ECU's to replace lengthy end-of-life tests

Manufacturing Engineer at ZBoard, Intuitive Motion Inc.
Modesto, USA | Jan 2017 - Apr 2017
- Played a dynamic rapid-prototyping role assisting in several R&D projects including the development of water-resistant footpads
- Reduced 3D print and installation time of footpad components by 40%

R&D Engineer at Displaypoint Manufacturing Inc.
Thornhill, Canada | May 2016 - Aug 2016
- Using analysis tools and AutoCAD, analyzed factory noise and engineered a factory-wide noise reduction system 65% less costly than a third party

PROJECTS

Automated Arc Fault Generator | Tesla
- Engineered a precision actuator for compliance with arc fault injection standards in a compact enclosure with HV voltage and current probes

Steering Wheel Redesign | UW Mini Baja SAE Team
- Analyzed torsional strength using basic Solidworks FEA techniques
- Redesigned to be stronger and more ergonomic, then constructed a maple and carbon fibre composite by hand for competition

High Capacity Backup Battery Timing Circuit | Bendix
- Designed a passive logic circuit to automatically switch power from main to backup and stay on for predefined time before shutting down
- Schematic capture in DxDesigner; test and simulation in LTSpice

Electric Skateboard Dynamometer | ZBoard
- Designed and built an Arduino operated electric skateboard dyno to generate speed and power curves of electric skateboard motors
- Modelled in Solidworks and created an Excel template for analysis

PCB Design | UW Midnight Sun Solar Car Team
- Developing circuits for the next solar car, learning Altium for PCB design

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