JOHN WEBSTER

BASC 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 today can improve the lives of people worldwide. I believe that I can bring change to the world.

TECHNICAL SKILLS

HARDWARE SKILLS

STM32 MICROCONTROLLERS
PADS SCHEMATIC CAPTURE
ARDUINO, RASPBERRY PI
SOLDERING
LTSPICE

MECHANICAL SKILLS

SOLIDWORKS (3D)
AUTOCAD (2D)
CNC MACHINING
RAPID PROTOTYPING
THERMAL DESIGN
POWER TOOLS

SOFTWARE SKILLS

C/C++, PYTHON
SIMULINK, MODELICA
FREERTOS
PLC LADDER LOGIC
ECLIPSE
GIT

EDUCATION

UNIVERSITY OF WATERLOO
SEP 2015 - APR 2020

UNIVERSITY OF QUEENSLAND
STUDY ABROAD
FEB 2018 - JUN 2018

ACTIVITIES

MUSIC - PIANO, SAX
BOARD SPORTS
HOCKEY
SOCCER
TRAVEL
FILMMAKING
PHOTOGRAPHY

PROFESSIONAL EXPERIENCE

Research Assistant at Technische Universität Hamburg-Harburg
Hamburg, Germany | July 2018 - Present
- Creating a multi-physics model of an industrial electrolyzer in Modelica

Hardware Engineer at Bendix Commercial Vehicle Systems LLC.
Elyria, USA | Sep 2017 - Jan 2018
- Implemented manufacturing improvements to a temperature controlled camera housing for documentation of reliability tests
- Conducted HALT tests on ABS ECU's in an experiment to define a new rapid results reliability test to replace AGREE-testing

Manufacturing Engineer at ZBoard, Intuitive Motion Inc.
Modesto, USA | Jan 2017 - Apr 2017
- Played a multifaceted role in a dynamic environment doing assembly, test, maintenance, management, and research & development
- Reduced 3D print time of footpad components by 40% by optimizing 3D print settings and made design changes to ease installation

R&D Engineer at Displaypoint Manufacturing Inc.
Thornhill, Canada | May 2016 - Aug 2016
- Independently analyzed factory noise and implemented an effective noise reduction system 65% less costly than a third party's solution
- Built team and task management skills managing independent R&D projects, directing small assembly lines, and working with clients

PROJECTS

FreeRTOS Radio Plotter | University of Queensland
- Programmed a Nucleo-F4 series microcontroller to draw shapes on a whiteboard plotter via Hamming-encoded radio signals in C
- Integrated PWM servo control of a laser to map the plotter path, status LEDs, and simple Manchester-encoded IR remote control

Wireless Telescope Team Project | University of Queensland
- Developed a ground control command line interface in Python and optimized the Bluetooth hardware used for communications
- Adopted a leadership role during system integration and small crises

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 off
- Schematic capture in DxDesigner; circuit submitted for a patent

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

CONTACT
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