JOSH BLATT

2A MECHATRONICS ENGINEERING

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PERSONAL PROFILE

I am a Mechatronics Engineering student at the University of Waterloo with strong interests in embedded systems and robotics. I am extremely excited to apply my skills and continue to improve upon them.

SKILLS

- C++
- Python
- Git
- Linux
- Vim
- Soldering
- JIRA
- Agile
- Java
- SolidWorks
- AutoCAD
- Strong programming fundamentals; can pick up new languages quickly

ACHIEVEMENTS

- High school valedictorian
- Recipient of Ontario Principles Award for outstanding leadership
- Recipient of Teacher's Life Bursary
- Recipient of the University of Waterloo's President's Scholarship with Distinction for having a grade 12 average >= 95%
- Placed 5th / 72 teams in the Don Mills Programming Gala

INTERESTS

- Electronics
- Rock Climbing
- Speed Solving Rubik's Cubes
- Analyzing Art
- Podcasts
- Documentaries
- TV shows
- Listening to Music
- Working Out
- Spending time with friends

EXPERIENCE

EMBEDDED TEST DEVELOPER

ecobee | May 2019 - August 2019

- Independently designed and programmed a Sensor Simulator using C++ to simulate the functionality of ecobee's SmartSensor, enabling the automation of 35+ sensor test cases which would otherwise take ~1 week of manual testing
- Used principles of Object Oriented Programming to create a virtual base class from which the various sensor classes inherit
- Automated ecobee thermostat integration tests using Python
- Programmed Python script to parse and analyze sensor packet data to make product decisions
- Designed test plan to verify functionality of the ecobee SmartSensor used for all production releases
- Assembled and tested circuit boards used for QA
- Worked closely with Product Managers in Agile environment to address issues with ecobee products by making JIRA tickets to notify developers

ELECTRICAL SUBTEAM MEMBER

Midnight Sun Solar Car Team | September 2018 - Present

- Worked alongside other members to redesign pre-charge circuit using Altium
- Added op-amps to pre-charge circuit for differential signaling to improve reliability of the board
- Verified battery box functionality by measuring the output voltages of each individual battery in the array

CAPTAIN OF FIRST ROBOTICS TEAM

Robo Sapiens - Team 5699 | September 2014 - June 2018

- Designed, built, coded, tested, and competed with a robot built in 6 weeks
- Programmed autonomous code and driver controls for robot using Java
- Worked with motors, gears, pneumatics, and conveyor belts to create systems capable of in-taking, lifting, and outputting objects
- Organized and led meetings for the team of 24 members
- Approached companies and obtained sponsorships totaling $3000 for the team

EDUCATION

UNIVERSITY OF WATERLOO

Candidate for Bachelor's in Applied Science in Honours Mechatronics Engineering

Relevant Courses
- Microprocessors and Digital Logic
- Data Structures and Algorithms (C++)
- Digital Computation (C++)
- Circuits