DOMINIC DOTZERT

2A Systems Design Engineering | 519-635-1163 | dominic.dotzert@uwaterloo.ca

SKILLS

- Python, Java, C++, Arduino, Android Studio, Git, PLC
- Excellent problem solving and debugging skills
- Ability to learn new programming languages and skills quickly
- Able to effectively manage multiple projects concurrently
- Working proficiency in the French language

EDUCATION

- Candidate for B.A.Sc., Systems Design Engineering, University of Waterloo, 2015-2020

RELEVANT COURSES

- Data Structures & Algorithms
- Digital Logic (Arduino)
- Digital Computation (C++)
- Engineering Design
- Human Factors Engineering

INTERESTS

- Hobby Electronics (Raspberry Pi, Arduino)
- Passion for learning new technologies
- Skiing, Scuba Diving, Sky Diving, Rock Climbing

RELEVANT EXPERIENCE

Jr Systems Engineer, *Spartan Bioscience* Sept – Dec 2016

- Designed efficient Python scripts to parse millions of lines of raw data, then generate detailed analysis reports
- Oversaw accelerated life testing on the company's flagship product – the world's smallest DNA analyzer
- Made critical contributions to hardware design decisions during weekly product design reviews
- Built a development tool in Excel that allowed for rapid prototyping of the optics system found inside the devices

R&D Engineering, *JNE Environmental* Jan – Apr 2016

- Developed the company's first automated chemical mixing system
- Independently learned PLC programming to code system from start to finish
- Developed problem solving and debugging ability through extensive troubleshooting of all aspects of the project
- System is now actively being used on customer sites

RELEVANT PROJECTS

Stacker*, Arduino Arcade Game* 2016

- Recreated the arcade game, "Stacker," using an Arduino and LED matrix
- Utilized two hardware buttons to take advantage of hardware interrupts and create a smooth and fast user experience

GPS Pet Collar*, Arduino Wearable Electronic* 2017

- Developed a wearable electronic collar to investigate the movement patterns of outdoor cats and dogs
- Implemented an Arduino GPS module to log coordinate data to a microSD card
- Created Python script to parse the data and plot a path onto Google Maps

YouTube Soundboard App*, Android Application* *2016 – 2017*

- Programmed a soundboard application that plays audio clips from several popular YouTube series
- Used multithreading and view recycling to create a responsive user interface