Ronald Gayowsky

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EDUCATION

UNIVERSITY OF WATERLOO
3A Mechatronics Engineering
Candidate for BASc
Expected April 2021

SKILLS

LANGUAGES

- Python ★★★★
- C++ ★★★★
- C ★★★
- Bash ★★★
- SQL ★★★
- Lisp ★★★

TOOLS / PLATFORMS

- Git
- JIRA
- Linux Terminal
- MySQL
- RasPi
- Arduino

INTERESTS

- Rock climbing
- Amateur musician
- Recreational hockey
- Woodworking

EXPERIENCE

BLACKBERRY

Automated Test Developer - Bootchain & Firmware — Winter 2019

- Established a device performance tracking system by creating a test suite and database in Python and SQL
- Redesigned a database to facilitate internal device tracking history using MySQL
- Built a script to upload automated test results to TestRail
- Wrote automated test scripts in Python for device firmware and bootchain security

CRYSTAL CLAIRE COSMETICS

Automation Engineering — Spring 2018

- Integrated UR5 collaborative robotic arms and sensors into existing manufacturing lines
- Created a multi-threaded programs in UR Script to consolidate function of external devices with the logic and movement of UR5 collaborative robot
- Drafted end-of-arm tooling in Solidworks to effectively pick up a wide range of products to reduce changeover time

RTG SYSTEMS INC.

Engineering Design Assistant — Fall 2017

- Created AutoLISP scripts to provide technicians custom drafting tools in AutoCAD
- Wrote project tracking functionality into company MS Access database with VBA to create transparency on project status
- Designed a contract generation script based on scope of work of job to ensure consistent language and reduce repetitive tasks

GENERAL DYNAMICS - MISSION SYSTEMS CANADA

Software Engineering — Winter 2017

- Investigated and debugged software issues in Ada and Java for the Aurora Surveillance Aircraft Mission System Software
- Built and installed software onto the aircraft computer system and test in a lab setting

PROJECTS

SPACE INVADERS ON EMBEDDED SYSTEM — Fall 2018

Develop for the ARM Cortex M3 Keil LPC1768 Microcontroller

- Designed multiple tasks to jointly handle game elements such as physics, logic, animation, and I/O
- Handled four I/O devices for player input and media output (potentiometer, push button, LCD display, LEDs)
- Written in C using μVision4

SKITTLE SORTER — Spring 2016

Develop a robot to sort skittles based on colour

- Programmed an arduino in C++ to receive input data from an RGB colour sensor
- Designed power delivery and logic circuits for microcontroller interfacing with stepper motors
- Drafted and 3D printed skittle flow control components in Solidworks

"PASS THE BUTTER" ROBOT — Fall 2016

Create a robot that can search and retrieve butter

- Responsible for mechanical design of the driving configuration, grabbing mechanism, and chassis
- Designed and implement a searching algorithm to categorize items and reject non-butter instances