Fanny (Yifan) Zhang

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SUMMARY OF QUALIFICATIONS

- Familiarity with QNX real-time operating system, C programming and scripting
- Understanding of OOP concepts in C++ through coursework and personal projects
- Design of embedded systems on Ubuntu Linux using C and C++ and experience with Arduino and Omega boards
- Exposure to Python, Open CV, and web development through hackathon experiences

TECHNICAL SKILLS

- Programming Languages: Java, C, C++, ARM assembly, Python, HTML, CSS, JavaScript
- Framework and Tools: Unix, SVN, Git, GitHub, GCC, GDB, AutoCAD, Inventor, Revit

EXPERIENCE

BlackBerry Software Development Student *01/2019 - Present*

- Used x86_64 and ARM assembly to increase speed in ray-building algorithm for two different boards
- Assisted in setting up interprocess communication between the instrumentation cluster and the control panel using Qnet
- Collaboratively built a virtual image to support interprocess communication

Westdale Secondary School, VEX Robotics Club *09/2016 - 05/2017*

- Co-led high school robotics club; delegated tasks and synthesized ideas
- Created a robotic claw and arm mechanism, capable of rotating 360 degrees and picking up objects with precision
- Communicated effectively with patients, physicians and nurses; trained newcomers with detailed instruction

PROJECTS

FaceNotie, Hack The Valley 2 *02/2018*

- Built a face detection engine to identify people and facial expressions using **Python**
- Incorporated **OpenCV**, **face_recognition**, **cv2** and **numpy** libraries to achieve a validation accuracy of 80%

Greedy Snake *10/2017 - 12/2017*

- Coded the snake game in **C** and **C++** with interfacing to hardware peripherals for instant data inputs
- Implemented the game on an Omega-2 embedded system; cross-compiled the code on a Linux VM
- Collaboratively implemented the game user interface; display the motion of the snake on an OLED screen

Crawl Space Project, Toronto's Space App Hackathon 2017 *04/2017*

- Collaboratively built the project website using **HTML**, **CSS**, and **JavaScript**
- Embedded a 3-dimensional model rendering engine into the website

Connect-Five Game *05/2017 - 06/2017*

- Built a Connect-Five board game independently using **Java**'s GUI design libraries
- Beta tested the game to identify and fix bugs; added additional features such as score counting

Dishwasher Indicator *05/2017 - 06/2017*

- Designed a dishwasher indicator independently using **Inventor**
- Analyzed 3D printed models and output results to iteratively refine the stability of the product

Education

University of Waterloo, BASc. Electrical Engineering *09/2017 - Present*