

# Andrew Poon

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## EDUCATION

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### **B.E.Sc Software Engineering with Co-op**

Sep 2018 – Present

University of Western Ontario, London

- Courses in Machine Learning, Artificial Intelligence, Cloud Computing, Operating Systems, Web Development, Network Architecture, and Network Application

## Experience

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### **IO Industries Inc**

May 2021 – Aug 2022

Student Computer Programmer

- Developed and maintained the Linux versions of camera control software including Debian-based and RPM-based Linux distributions using C++ and QT
- Implemented a multi-threaded approach to executing bash scripts through the camera control software; Manually converted batch script from Windows to bash script on Linux.
- Managed network and PC configuration to facilitate software and hardware testing which included the M.2 PCIe card, the 40Gbps network card and network switches.
- Tested releases of camera control software and camera firmware for control-breaking bugs.
- Trained new programmers on C++, QT and Linux development and provided general guidance.
- Learned the basics of volumetric cameras starting from FPGA board, sensor, IR lens, firmware, registers within camera, Bayer filter, synchronization protocol and various sensor trigger and SMPTE standard.

## Project

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### **Foodsnap**

Nodejs, Express, React, Google Vision API

- Developed a capstone project website enabling users to upload images of their plate of food and effectively segment into various food groups. Implemented functionality for users to select individual ingredients and estimate nutritional information for their plates.
- Integrated USDA API for reliable nutritional information. Utilized either weight or area measurements of the food to estimate precise nutritional values.

### **Peer-To-Peer Image sharing network**

JavaScript

- Developed a command-line based program facilitating image querying within a peer-to-peer network.
- Implemented random binding of peer nodes to available ports for seamless network connectivity. Utilized a custom network protocol called Image Transfer Protocol(ITP)

### **Chatroom service**

C++ and python

- Developed GUI based program to offer 50 public chatrooms for multiple users to connect and share messages with each other.
- Applied skills such as multithreading, blocking threads and semaphore for the C++ server side and python Tkinter for the client side. Hosted the chatroom on Amazon EC2 server.

## Technical Skills

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- Java, JavaScript, C++, Python, C#, Linux/Bash, React, git, Subversion, Angular, Nodejs,
- QT, Unity, Javafx, SQL/MySQL, XML, MongoDB, AWS/GCP, Mocha, Pytorch, Wireshark