
Education

Sept 2018 **MSc in Computer Science**, University of Toronto
◦ Supervisor: Eyal de Lara

Sept 2015 - Present **Bachelors of Computer Science**, Simon Fraser University
(Expected April 2018) ◦ GPA: 3.71/4.33

Skills

- Proficient in C, C++, and Java
- Proficient in Python and data science libraries such as NumPy, Pandas, StatsModels, SkLearn and Spark
- Experienced with MatLab, Go Lang, Scheme, Haskell and Ruby
- Proficient in embedded systems development on Linux and bare metal
- Proficient in Android development
- Experienced in web based application development including REST API development and database integration
- Strong understanding of computer architecture, multi-threaded programming, distributed systems, data structures and algorithms
- Strong understanding of database concepts, SQL and NoSQL
- Proficient in both Windows and Linux environments
- Proficient in Git and SVN
- Experienced in working with teams (2-7) members, agile development, scrum and taking leadership roles

Projects

March 2017 - Present **SFU Carpool** DEVELOPER
◦ Developed a web application for students to arrange carpools to university campus
◦ Used AngularJS and Bootstrap to create a responsive webpage
◦ Used a SQL Server database to store application data
◦ Developed web service using ASP.NET to interface with the database
◦ Worked in a group of 3 students

Sept - Dec 2017 **Gallerio** DEVELOPER
◦ Developing a camera and gallery Android application which categorizes photos using machine learning based on image recognition
◦ Used image recognition web service and built in image recognition model to allow online and offline functionality
◦ Developed search functionality to find pictures using keywords, color, date and logical expressions

- Sept - Dec 2017 **SFU Security System** DEVELOPER
- Developing a system for SFU Security to keep track of security incidents and employees
 - Consisted of database, web service, desktop and mobile application, and a web page
 - Developed an SQL Server database to maintain records of incidents, people, guards, and reports
 - Developed a web API using Java Spark to interface with the database over HTTPS and SSL
 - Developed a JavaFx desktop client to display current information from database
 - Enabled desktop application to respond to real-time updates using sockets
 - Working in a group of 7 students
- Nov 2017 **Morse Code Driver** DEVELOPER
- Developed a morse code driver for a BeagleBone computer running Debian Linux
 - Recompiled Linux kernel to create a custom version and compiled driver for it
 - Created driver would create a virtual file to accept strings and output the corresponding morse code to LEDs
 - Created driver would create an LED trigger to enable any recognized LED to output morse code
 - Programmed in C on a host computer and cross compiled for BeagleBone
- May - Sept 2017 **Program Analysis Research Project** RESEARCHER
- Researched program analysis techniques under the supervision of Professor Nick Sumner
 - Studied symbolic execution practices and methodologies
 - Created a search heuristic to accelerate symbolic execution for software testing
 - Programmed the search heuristic using the Angr library in Python
- July - Aug 2017 **Gait Analysis** DEVELOPER
- Used Android phone to collect accelerometer and gyroscope traces of people walking
 - Used Python to analyze traces and calculate step count and walking distance
 - Used traces to differentiate walking patterns of different users using machine learning
 - Completed analyses in Python, using NumPy, Pandas, SkLearn
- Sept - Dec 2016 **Down To Anything Web Application** DEVELOPER
- Collaborated in a team of five to create a web application called Down To Anything
 - Provided a challenge based social network, allowing users to create and complete challenges
 - Implemented support for accounts and video sharing, and maintained rankings of posts and users
 - Created using Ruby on Rails
- Sept - Dec 2016 **Smart Terrarium** DEVELOPER
- Created a smart terrarium, in a team of 4, which controlled an environment to support plant life
 - Used a temperature, humidity and brightness sensor to record the environment
 - Used a BeagleBone computer to control lights, humidifier and fans to optimize the environment
 - Designed a web application using NodeJS to remotely control and monitor terrarium
 - Programmed the embedded system in C and JavaScript

Jan - Apr 2016 **Bar-code Reader** DEVELOPER AND BUILDER

- Collaborated in a team of two to create a bar-code reader from Lego Mindstorms
- Used a light sensor to read a bar-code on paper
- Processed bar-code in MatLab to produce the bar-code's value
- Programmed in C and MatLab

Sept - Dec 2015 **Vending Machine** DEVELOPER

- Worked in a team of six to create an embedded system to control a vending machine
- Allowed users to use NFC and a touch screen interface to obtain snacks
- Created using Arduino and Raspberry Pi

Volunteer Work

Aug 2015 **ISEA 2015** EXHIBITION SETUP

- Received and setup technology based art exhibits
- Provided assistance to staff and visitors in the art gallery

Apr 2014 **Computers for Schools** ASSEMBLER

- Assembled computers and laptops that were donated to schools
- Loaded operating systems and drivers onto systems

Academic Achievements and Awards

- Qualified as Golden Key International Honor Society Member
- Awarded SFU Alumni Scholarship (\$500) in February 2016
- Awarded Passport to Education Scholarship (\$500) in September 2015
- Distinguished as a National AP Scholar in July 2015