

TECHNICAL SKILLS (*bold skills indicate proficient knowledge)

- Languages: **Java**, **C++**, **C**, **Python**, C#, SQL, Javascript, Bash
- Environments: **Windows**, **Linux**, **Visual Studio**, **VSCode**, **Android Studio**, **IntelliJ**, **Vim**, **Unity**
- Technologies: **Git**, **Android**, **REST**, **JSON**, Vue, AWS Lambda, Firebase, Teradata

ACADEMIC & CO-OP STATUS

University of British Columbia Sept 2014 – May 2019

BASc Computer Engineering, Dean's Honour List

- Completing 3/5 work terms; available for 4 or 8 months beginning January 2018
- Current recipient of Trek Excellence Scholarship for achieving top 5% of domestic students

WORK EXPERIENCE

Hootsuite – Python, Go Sept 2017 – Dec 2017

Software Developer Intern (Production Operations and Development)

University of British Columbia – Java, C May 2017 – Sept 2017

Undergraduate Researcher

- Developed DINAMITE, a software performance analysis toolkit for C and C++ programs under Dr. Alexandra Fedorova
- Established Java support for DINAMITE by implementing CPU tracing using JVMTI, ASM and Java's instrumentation API
- Reduced overhead of CPU tracing by 50-100% by leveraging RTDSC instruction to capture timestamps

Safe Software – C++, Java May 2016 – Dec 2016

Software Developer Intern (Platforms)

- Upgraded C++ compiler (VC10 to VC14) for over 800+ projects enabling C++11 features for all developers
- Wrapped 3rd party libraries and re-design interfaces to fix DLL boundary issues
- Implemented Teradata format using Java (JDBC), allowing customers to read from and write to Teradata databases
- Designed scalable solutions for bugs, document bug fixes and create regression tests to reduce technical debt

PROJECTS & HACKATHONS

UBC Course Schedule Creator – Python, Javascript Apr 2017 – Present

- Created the front end using Vue and Bootstrap
- Outputted all possible schedules given input courses as a REST service using AWS Lambda and Amazon API Gateway
- Scraped data for every course at UBC using Python (requests, BeautifulSoup, lxml) then storing it on Google Firebase

Food Shake – Android/Java Mar 2017 – May 2017

- Solved the question "Where should we eat?" by randomly selecting a nearby restaurant upon shaking the phone
- Created an Android library for wrapping Yelp's API using Retrofit and GSON
- Integrated Yelp's and Google Map's API to display restaurant details, pictures, and directions
- Implemented optional user preferences such as budget, cuisine type, and proximity

Toy Gun Turret – C, Android/Java, Verilog Jan 2017 – Apr 2017

- Integrated a camera, LCD screen, Wi-Fi/Bluetooth chip, motors to track objects, rotate, take pictures, and fire projectiles
- Designed a reliable and efficient Bluetooth communication protocol between the Android device and turret
- Implemented object tracking and motion detection using OpenCV

UBC Snowbots – Python, C, C++ Sept 2014 – Sept 2016

- Built an autonomous robot that navigates through an obstacle course – placed 4th (2015), 5th (2016) in design at IGVC
- Integrated GPS firmware to relay real-time data for software driver to make decisions
- Implemented algorithm to calculate distance and angle towards a given GPS waypoint

Blackjack Game – Java Dec 2015 – Sept 2016

- Designed the GUI using JavaFX; Implement dealer AI, wagers, double down, split, and high score mechanics

Arduino-Based Autonomous Robot – C, Android/Java Jan 2016 – Mar 2016

- Implemented autonomous driving using Turtle:2WD mounted with an ultrasonic sensor to detect and avoid objects
- Designed a negative feedback loop to ensure straight movement by integrating hall-effect sensors on both wheels