

Felix He

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Award-winning competitive programming team member at the University of British Columbia, exceptionally proficient in the implementation and application of data structures and algorithms. Wide breadth of computer science skills, developed through hackathons, competitions, internships, and extracurricular personal projects.

Programming Languages and Tools: C, C++, JavaScript, Python, Java, SQL, HTML, CSS, Git, Terminal

Work Experience

Software Development Student, Co-op

MAY 2019 - AUGUST 2019

BlackBerry Limited - Security & Firmware - Waterloo, Ontario

- Modernized the security-firmware build system from Kati/Makefile to Soong/Bazel/Ninja, and created a command-line utility with C and Graphviz to visualize the migration's updated build dependencies.
- Removed errors and refactored Android native vendor code, particularly within the bootchain-level event-scheduling system, by writing several thousand lines of C, CMocka fixtures, and unit tests.
- Achieved expertise in operating *nix terminal tools within the Android Open Source Project's ecosystem.

Technical Systems Analyst, Co-op

JANUARY 2019 - APRIL 2019

Royal Bank of Canada, Capital Markets - Digital Channels - Toronto, Ontario

- Developed a load-tested (with Apache JMeter), LDAP-authenticated API, with Node.js and Express.js, to act as middleware around an Apache Solr-based search engine serving around 60,000 visitors a day.
- Created a marketing-analytics visualization tool, with the ability to upload, archive, and manipulate tabular data files online, by using JavaScript, HTML, CSS, Batch scripts, and Microsoft SQL Server through TDS.
- Utilised XSLT and XPath to generate front-end XML transformation scripts for non-technical staff.

Extracurriculars

Team Member, Division 1

NOVEMBER 2017 - PRESENT

UBC ACM-ICPC Competitive Programming Team - Vancouver, British Columbia

- Implemented optimized C++ programs to solve algorithmic and mathematical programming problems.
- Notably placed 2nd out of 73 teams in the 2018 ACM-ICPC PacNW Division 2 Regionals, and in the top-third of all teams in the 2018 North American Invitational Programming Competition.

SquatRackCurl

DECEMBER 2019 - PRESENT

Personal Project - <https://github.com/felixhe97/squatRackCurl>

- Creating a parallelized HTTP 1.1 command-line client in C, using Unix TCP sockets and POSIX threads.
- Other projects include a JavaScript unit-tested algorithm library, and the backend of a card game website.

Education

University of British Columbia

EXPECTED GRADUATION: APRIL 2021

Bachelor of Commerce, Combined Major in Business & Computer Science - Undergraduate Degree - in progress