

# Felix He

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Award-winning competitive programming team member, with a wide breadth of computer science skills developed through hackathons, competitions, internships, and extracurricular personal projects. Expected to graduate with a Combined Bachelor's in Business and Computer Science from the University of British Columbia in April 2021.

Personal projects spanning various tools and languages can be found at <https://www.github.com/felixhe97>.

Programming Languages and Tools: C, C++, JavaScript (NodeJS & React), Python, Ruby, Java, SQL, \*nix, Git

## Work Experience

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### Software & Data Engineering Intern

JUNE 2020 - AUGUST 2020

KeepTruckin, Inc. - App Marketplace

- Utilized Python, Apache Spark, Snowflake, Airflow, Qubole, Looker, Fivetran, and Redash, to engineer high-bandwidth pipelines and ETL transformations within distributed data lakes/warehouses.
- Synced the PostgreSQL database to Tableau by creating a REST client library within the core application's Ruby on Rails servers, in order to handle dynamic migration of user account information.

### Firmware Engineering Intern

MAY 2019 - AUGUST 2019

BlackBerry Limited - Security & Firmware

- 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 major system errors by refactoring bootchain-level Android native vendor code, and proved correctness of code by creating 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.

### Full-Stack Engineering Intern

JANUARY 2019 - APRIL 2019

Royal Bank of Canada, Capital Markets - Digital Channels

- Developed a lightweight, load-tested, backend API, serving an average of 60,000 visitors a day, with Node.js and Express.js, to act as a cache and sanitization middleware around an Apache Solr-based search engine.
- Created an online marketing-analytics visualization tool, with the ability to upload, archive, and manipulate tabular data files, through HTML/CSS, JavaScript, Batch scripts, and Microsoft SQL Server through TDS.
- Coded in XSLT and XPath to generate front-end XML transformation scripts as reusable UI components.

## Extracurriculars

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### Team Member, Division 1

NOVEMBER 2017 - PRESENT

University of British Columbia ACM-ICPC Competitive Programming Team

- Implement 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.