

# NATHAN KO

3A Software Engineering

647-636-0256 // [nathan@nathanko.com](mailto:nathan@nathanko.com) // [nathanko.com](http://nathanko.com) // [github.com/nathanko](https://github.com/nathanko)

## Skills

Java / Python / C++ / C

JavaScript / HTML / CSS

Angular / jQuery / RxJS / Node / Express / Flask

Linux / Android OS

SQL / MongoDB / PostgreSQL

NLTK / scikit-learn

Design thinking / Agile

Git / JIRA

## Experience

### Software Product Prototyper, Deloitte

Sep – Dec 2018

- Spearheaded the front-end design and development of a client web app using Angular and RxJS
- Automated the provisioning of infrastructure (as code) and deployment of software onto AWS using Terraform and Ansible

### Security Software Development Student, BlackBerry

Jan – Apr 2018

- Added security features for a custom Android OS build for enterprise and certified secure devices
- Prototyped an Android service that automatically triggers user-defined device settings on specific events
- Developed APIs in Java, C++ and C to the Android hardware abstraction layer to facilitate inter-process communication between Android and Linux services for new Wi-Fi security features

### Software Systems Developer Co-op, Government of Canada

May – Aug 2017

- Developed a monitoring and notification service for a large cloud analytics platform with a RESTful API built in Python using Flask, JSON Web Token authentication and PostgreSQL
- Created user-friendly web interfaces using jQuery and Bootstrap to allow clients to conveniently query and visualize large datasets from a cloud database
- Wrote and maintained scripts to monitor system status and send email alerts

## Personal Projects

- **File Sharing App** — Created a web app with Bootstrap and jQuery to allow users to conveniently share large files using short URLs
- **Tic-Tac-Toe Game Platform** — Developed an Android client app that integrates with a cloud database (Firebase) to play online tic-tac-toe games
- **Text Classifier** — Used NLTK and scikit-learn to develop a text classifier
- **Computer Vision Face Tracker** — Built a web app using OpenCV and Flask (Python) to detect and track faces from a video stream and using MongoDB to store data

## Awards

- Schulich Leader Nominee, The Schulich Foundation & UJA Federation 2016
- National Advanced Placement Scholar (Canada) Award, College Board 2016
- Bronze Standard of the Duke of Edinburgh Award, H.R.H. Prince Philip, Duke of Edinburgh 2015

## Education

Bachelor of Software Engineering Candidate, University of Waterloo

Sep 2016 – Apr 2021