

NATHAN KO

3A Software Engineering

647-636-0256 // nathan@nathanko.com // nathanko.com // github.com/nathanko

Skills

Java / Python / C++ / C

JavaScript / HTML / CSS

Angular / jQuery / RxJS / Node / Express / Flask

Linux / Android OS

SQL / MongoDB / PostgreSQL

scikit-learn / NLTK

Git

Agile / Design thinking

Experience

Software Prototyper, Deloitte

Sep – Dec 2018

- Spearheaded the front-end design and development of a client web project using Angular and RxJS
- Automated the provisioning of infrastructure and deployment of software onto AWS EC2 using Terraform and Ansible

Security Software Development Student, BlackBerry

Jan – Apr 2018

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

Software Systems Developer Co-op, Government of Canada

May – Aug 2017

- Built a monitoring and notification service for a large cloud analytics platform with a RESTful API in Python using Flask, JSON Web Token authentication and PostgreSQL
- Created a user-friendly and convenient web tool using jQuery and Bootstrap for clients to pull large datasets from a cloud database and visualize them in Tableau Desktop
- Wrote and maintained scripts to monitor system status and send email alerts

Personal Projects *(names are linked to app/repo)*

- **Reverse Dictionary App** – Built an app that searches for words in the English dictionary that fit a given definition using natural language processing with scikit-learn and NLTK
- **Computer Vision Face Tracker** — Developed a web app in Python using OpenCV and Flask that detects and tracks faces from a video stream and stores the data in MongoDB
- **File Sharing Tool** — Created a web app with Bootstrap and jQuery that allows users to upload large files and share them conveniently using short URLs
- **Tic-Tac-Toe Android Game** — Developed an Android app that integrates with a cloud database (Firebase) to play online tic-tac-toe games

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