

ALEX ROTH

SOFTWARE ENGINEERING STUDENT

✉ alex@magmastone.net
🌐 alexroth.me
☎ (647) 808-3846
📍 magmastonealex

Skills

LANGUAGES & TECHNICAL SKILLS

Java
Python
Objective-C
C
PHP
JavaScript
Bash
SQL
Linux Administration
HTML5/CSS3

Education

University of Waterloo
B.Eng Software Engineering
(Candidate) 2020

Summary

- Experienced and professional developer with 5 summers of industry work experience, and 10 years personal learning
- Highly skilled at development of mobile apps and front/backend of websites
- Focused on building software that makes the lives of users easier, simpler, and more efficient
- Experienced in entire software development life cycle

Employment

Milq · **Android Development Intern**

May 2016 to Aug 2016

Worked as the sole developer for Milq's Android app. First month was spent making improvements to the existing app, and the rest of the term was spent iterating on a new product direction.

- Rapidly prototyped new features and UI/UX to allow quick iteration on a new MVP
- Quick turnaround time allowed team to make decisions about features before weeks were spent implementing on other platforms.
- Consistently delivered excellent results ahead of schedule, leading to an outstanding ranking
- Provided input on proposed designs and features to make the app better suited to the Android platform

MagmaStone · **Founder & Developer**

2012 to 2015

Created MagmaStone in second year of high school to work as a freelancer on many contract programming jobs. Built applications from basic specifications into deliverable products.

- Built 11 full applications for international clients, many on the App Store and Play Store
- Delivered business-critical solutions for 3 companies
- Created applications for many different platforms, including Android, iOS, Web, desktop, and backends
- Developed software for many scales - small iPhone math quiz apps, to large server-side inventory and form systems
- Developed communication skills through determining requirements from customers who were not technically-oriented

Projects

WatAreMyClasses - git.io/watclass

Navigation and class schedule mobile app intended for first years and visitors at UWaterloo. Able to use GPS and pathfinding to display and follow a path from anywhere on campus to any building. (Currently taken off of storefronts)

- Over 300 users in the first 2 days
- Multi-platform (iOS, Android, Web) native app
- Designed and implemented scalable backend and all frontends
- Integrated UWaterloo open data APIs and federated login

GPGMail - git.io/gpgmail

GPGMail is a from-scratch mail client for Android which has full support for PGP encrypted and signed mail. All of the current alternatives are dated in UI and aren't easy to use. Currently undergoing development.

- Implements RFCs to correctly parse and create emails
- Interacts directly with IMAP/SMTP servers as well as the OpenKeychain GPG API.

WatSat

WatSat is a Waterloo Student Design Team trying to build a small satellite for the Canadian Satellite Design Competition

- Developed main application software in C, including device drivers, multithreaded communication, and overall architecture.
- Working on modifying Linux kernel to run on our custom board

CryptoSMS

Native Android app allowing users to send encrypted messages over the SMS network - no data required

- Designed new approach to encrypted peer-to-peer messaging
- Employed multiple cryptographic technologies and techniques to build a secure application