

# NEELAKSH BHATIA

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## SKILLS

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Languages: Python, C++, Swift, SQL, Bash, Javascript  
Technology: GRPC, Protobuf, OAuth, AWS, Redis, Express, RIB / VIPER, ReactiveX

## EXPERIENCE

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### Splunk

*Software Engineering Intern*

San Jose, CA

May 2019 | August 2019

- Designed and implemented a (patent-pending) low-light QR code detection framework that is used by 700k+ MAU's using a **custom CNN** and **ARKit**, improving detection accuracy from 40% to **over 95%**
- Added the ability to view videos, images and PDFs in augmented reality while maintaining **<80% CPU/GPU usage**
- Prototyped real-time image segmentation, object detection and edge highlighting techniques on mobile devices
- Maintained internal iOS networking SDK by responding to developer and customer feedback

### Secret Mission Software

*Software Engineering Intern*

Toronto, ON

September 2018 | December 2018

- Built a P2P chat system for an upcoming social media app (**500k+ installs**) using the extensible messaging and presence protocol (XMPP)
- Created **distributed backend microservices** for chat by utilizing GRPC and Protobufs, reducing the size of the network request payload by **>10%**
- Integrated the ReactiveX and IGListKit frameworks to create a highly performant and light-weight frontend experience by **minimizing UI redraws** and using a **just-in-time data fetching paradigm**
- Worked with the strongly opinionated RIB / VIPER architecture to manage the app hierarchy

### TD Bank Accelerator Lab

*Mobile Developer / Prototyper Intern*

Waterloo, ON

January 2018 | April 2018

- Developed 2 complete consumer-facing mobile apps using Swift, Java and React Native
- Responsible for conducting consumer research, brainstorming potential improvements, and weekly iterations based on internal and external user testing

### Wattpad Inc

*Web Developer / Mobile Test Automation Intern*

Toronto, ON

May 2017 | August 2017

- Improved the detection speed of a spam detector tool by **5x** using a **probabilistic search paradigm**
- Developed an internal devops system in ReactJS / Python to automate the delegation of JIRA tickets/stories
- Automated **200+ iOS end-to-end UI tests** using Xcode's testing framework, resulting in a peak of **99.2% crash free sessions**

## PROJECTS

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### JARVIS Python, Express, C

- A smart-assistant / extensible platform that is designed to reduce friction in the life of the everyday programmer
- You can interface with JARVIS via an **intent-action system** using **NLP**

### Dot Swift, SnapKit

- A bullet journalling app that leverages the Apple Pencil hardware for the iPad
- Uses a proprietary vector drawing algorithm that allows for an **unlimited number of strokes** without experiencing any slowdown

### Notey React, Firebase

- An all-in-one Markdown/LaTeX note-taking platform designed for university students
- Uses a modified Markdown parser that doesn't block for long periods of time as to offer **real-time, inplace formatting**

## EDUCATION

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University of Waterloo

B.CS Computer Science

Waterloo, ON

Sep 2016 - April 2021