

# Ibrahim Irfan

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## EDUCATION

### UNIVERSITY OF WATERLOO | SOFTWARE ENGINEERING 2022

Sep 2017 – Apr 2022

## SKILLS

<b>Proficient</b>	Python, Go, C++, C, Node.js, AWS, HTML/CSS
<b>Comfortable</b>	Ruby, Scala, PHP, MySQL, .NET
<b>Familiar</b>	Docker, MongoDB, OpenCV, TensorFlow

## EXPERIENCE

### GOOGLE | SOFTWARE ENGINEERING INTERN

Sep 2019 – Dec 2019 | Mountain View, CA

- Worked on the **Google Assistant** media team to enhance the radio listening experience for millions of users.
- Developed in **C++** to add support for high-demand new queries, such as "play iHeartRadio".
- Refactored code for numerous top queries like "play Spotify" and "play radio" to allow for a better development experience.
- Wrote script in **Python** to parse data on over **18,000** radio stations in Europe to accurately evaluate coverage.

### STRIPE | SOFTWARE ENGINEERING INTERN

Jan 2019 – Apr 2019 | San Francisco, CA

- Found **200+ high/critical security vulnerabilities** by developing a CLI in **Go** to automatically find, classify, and fix vulnerable dependencies.
- Developed a secure file transfer tool in **Ruby** and helped numerous teams migrate from insecure methods, with **50+ files** transferred in 3 weeks of release.

### THOMSON REUTERS | SOFTWARE ENGINEERING INTERN

May 2018 – Aug 2018 | Toronto, ON

- Reduced build time by **40%+** by parallelizing API and UI builds, saving over **6 minutes** per build.
- Fixed AWS ECS crashing by caching API calls to reduce container CPU and memory usage by **70%+**.
- Automated project infrastructure and deployments using **AWS CodePipeline** to ensure end-to-end continuous integration, saving numerous hours per week.

### GEOTAB | SOFTWARE DEVELOPER INTERN

Jun 2017 – Aug 2017 | Oakville, ON

- Led the development of an HR automation system which drastically reduced redundancy in the company hiring process, saving hours per hire.
- Significantly increased employee efficiency through creating an accurate resume parser and automating emails with **Google Apps Script**.

### VICEROYMEDIA | WEB DEVELOPER INTERN

Jun 2016 – Dec 2016 | Oakville, ON

- Collaborated with a team to develop an Exam Network web app for the **University of Guelph**.
- Implemented a file system for course materials using **JavaScript**, including viewing, uploading, and downloading files.

## PROJECTS

### PALM VEIN AUTHENTICATION SYSTEM | HACK THE NORTH 1ST PLACE

Aug 2018

- Built a palm vein authentication system with over **93% accuracy** using Python, OpenCV, and TensorFlow using infrared LEDs and a RaspberryPi.
- Used OpenCV image processing to consistently reduce noise and skeletonize the vein image.