

# Russell Islam

university of waterloo computer engineering '22

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## skills

**Languages** / Python, Java, C++, C, JavaScript, Bash, SQL

**Technologies** / Node.js, Express, React, Flask, Django, Kafka, Spring Boot, Postgres, ROS

**Tools** / Docker, AWS, GCP, Jenkins, Terraform, Maven, Git, Vim, Linux

## education

**University of Waterloo** / Candidate for Honours BSc in Computer Engineering

Sept 2017 – Apr 2022

- **Awards:** Term Dean's Honours List (**Rank 14/181**), President's Entrance Scholarship
- **Extracurriculars:** Watonomous (Self - Driving Car Team), UW Data Science Club

**GPA: 3.7/4.0**

## experience

**Autodesk** / Backend Software Engineering Intern

Sept 2020 – Dec 2020

- Developed APIs for the **Autodesk Forge** platform for interfacing with cloud file systems used by Fusion 360 clients
- Maintained **Java Spring Boot** applications and integrated new features using Spring tools and **Maven** plugins
- Automated generation of **Swagger** documentation from Java code, saving **hours** of time required from developers
- Refactored **dynamic SQL query builder** to implement new features used by APIs for **thousands** of database calls
- Improved Jenkins CI deployment process of core repositories to reduce test flakiness of builds by **66%**

**Capital One** / Software Engineering Intern

Jan 2020 – Apr 2020

- Independently created **patent-pending** enterprise Python package to verify and integration-test AWS infrastructure
- Integrated said package into all AWS pipeline deployments via **Jenkins** which eliminated up to **5 days (100%)** of deployment time from the production infrastructure change process
- Designed and deployed serverless infrastructure for **AWS Lambda**, **AWS Kinesis** and **Kafka** pipelines responsible for detecting double charges in customer transactions and to notify users in real time

**Clearpath Inc.** / Backend Software Developer Intern

May 2019 – Aug 2019

- Created infrastructure on the fleet manager team for **simulated robots** and developed APIs used by fleet software
- Redeveloped Virtual Robots by using ROS2, yielding in **28%** less memory used per robot within fleets of 40+ robots

**eSentire** / Backend Software Developer Intern

Sept 2018 – Dec 2018

- Developed Flask APIs for parsing NetFlow data and interfacing with **Postgres** databases for packet inspection
- Constructed unit and integration tests using Python libraries such as **Pytest** and **Unittest**, achieving **70%** coverage

## projects

**Daily Chess Pro** / Python, GCP (App Engine, Cloud SQL), Facebook Messenger API, Flask

- **HackTheNorth 2020++** submission; Facebook Messenger Bot which sends subscribed users daily chess puzzles
- Utilized Google Cloud Platform's App Engine to host Flask API for handling Facebook Messenger **webhooks**

**redditmakesart** / Python, JavaScript, AWS (EC2, Lambda, RDS), React, Flask, NGINX

- Web application which acts as a showcase for daily top art content created by Reddit users on the r/art subreddit
- Leveraged React to implement **infinite scroll** and used AWS Lambda to automatically retrieve **50+ images** daily

**SpotiVi** / JavaScript, React, Express, Node.js, Spotify API

- Custom **Spotify web client** which provides music playback interaction with any active device using **Vim hotkeys**, improving accessibility features by eliminating the need to use a mouse
- Implemented functionality such as **play/pause**, seek **forward/backward** and toggle **shuffle/repeat**