Russell Islam

university of waterloo computer engineering '22

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skills

Languages / Python, Java, JavaScript, C, C++, Bash, SQL
Technologies / Node.js, Express, React, Flask, Django, Kafka, Spring Boot, MySQL, Postgres, MongoDB ROS
Tools / Docker, AWS, GCP, Jenkins, Terraform, Maven, Git, Vim, Linux, Valgrind, GDB

education

University of Waterloo / Candidate for Honours BASc in Computer Engineering *Sept 2017 – Apr 2022*
- **Awards:** Term Dean's Honours List **(Rank 14/181)**, President's Entrance Scholarship *GPA: 3.7/4.0*
- **Relevant Coursework:** Data Structures and Algorithms, Systems Programming and Concurrency, Compilers, Operating Systems, Database Systems, Computer Networks, Distributed Computing, Software Architecture

experience

Autodesk / Back End 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. / Back End 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 / Back End 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 async loading 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