






# Shehan Suresh

## 3A Software Engineering

 shehan.suresh@uwaterloo.ca  
 <http://github.com/shehan29>  
 shehansuresh.me  
 [linkedin.com/in/shehansuresh](https://www.linkedin.com/in/shehansuresh)  
 (416) 471-8024

## EDUCATION

### University of Waterloo

Software Engineering  
Artificial Intelligence Option  
Sept 2016 – Present  
GPA: 3.96/4  
Cumulative Average: 91.4%

## SKILLS

### Languages

Java, Python, C/C++, SQL, Bash, Scala

### Frameworks

TensorFlow, Keras, Scikit-Learn, Spring, Lucene, Node.js, React, Ionic, Selenium

### Tools

Kafka, Amazon Web Services, Unix, WebSphere Liberty, Jenkins, Docker, Git

## AWARDS

Outstanding Intern Award IBM, Capital One	2018
Hack the Valley MLH 3rd Place out of 76 teams	2018
Dean's Honours List (Top 10%) 1A, 1B, 2A, 2B	2018
Electric City Hacks Top 5 + Wolfram Alpha Award	2017
President's Scholarship of Distinction and Nortel Scholarship	2016

## WORK EXPERIENCE

### IBM • Watson Data and AI Co-op • Fall 2018

*Java, Bash, Apache Lucene, WebSphere Liberty, Jenkins*

- Spearheaded the development of the **Asset Management Service** for the launch of **Watson Studio Desktop**
- **Architected** file system utility APIs that made up **60%** of the **backend** for the critical service
- Developed a custom **document indexer** in order to perform **complex search queries** using **Apache Lucene**
- Wrote and maintained **backup scripts** that ensured the **resiliency** of user data in **Watson Knowledge Catalog**

### Capital One • Software Engineer • Spring 2018

*Python, Java, JavaScript, TensorFlow, Kafka, AWS, Docker*

- Engineered alerts application to reduce account takeover fraud loss by **\$2.5 million** and accelerated the alert delivery time by configuring **multi-threading**
- Increased fraud loss coverage by **18%** by implementing 20 new asynchronous **aggregate features** using **Java Streams** for the transaction fraud detection model
- Strengthened fraud model monitoring by leveraging **self-taught** JavaScript visualization frameworks (D3, DC and crossfilter) to build a **configurable interactive dashboard**
- Built and trained a **deep learning model** using **TensorFlow** and **Keras** frameworks in order to identify new features for the fraud detection model

### National Instruments • Software Developer • Summer 2017

*JavaScript, Node.js, Python, Django, Selenium, Jasmine*

- Independently developed a **WebRTC library** that allows users to stream data from external devices in real time
- Created a **Node.js server** that implements the OpenScope API protocol using **REST APIs** in order to better examine the data streaming capabilities of the product

## SELECT PROJECTS

### ZoomAI

*Python, Pygame*

- Designed a flexible **Reinforcement Q-Learning** model that can be trained on **various inputs**
- Trained the **Artificial Intelligence** model over several epochs to **self-drive** in a racing game made with **Pygame**

### FINDR – Hack the Valley II

*Python, OpenCV, Raspberry Pi, Firebase*

- **Autonomous** robot equipped with a **webcam** and **ultrasonic sensors** that locates people in distress
- Utilized **OpenCV** to detect people and plot their GPS co-ordinates on a map in **real time** using **Firebase**