

# Shehan Suresh


## 4A Software Engineering

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## EDUCATION

### University of Waterloo

Software Engineering

Artificial Intelligence Option

Sept 2016 – Present

GPA: 3.97/4

Cumulative Average: 91.9%

## SKILLS

### Languages

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

### Frameworks

Hadoop, Spark, ZooKeeper, TensorFlow, Keras, Spring, Lucene, Selenium

### Tools

Kafka, Redis, Presto/Hive, MongoDB, Unix, Docker, Git, Amazon Web Services

## AWARDS

Outstanding Intern Award 2020

Citadel, Wish, IBM, Capital One

Dean's Honours List 2019

1A, 1B, 2A, 2B, 3A, 3B

Hack the Valley 2018

MLH 3rd Place out of 76 teams

Electric City Hacks 2017

Top 5 + Wolfram Alpha Award

President's Scholarship of 2016

Distinction and Nortel Scholarship

## WORK EXPERIENCE

### Citadel Securities • Software Engineer • Winter 2020

*Python, C++, Kafka, WebSocket*

- Added performance metrics monitoring for a **distributed streaming platform** enabling the reduction of latency by **25%** and memory by **10%**
- Designed and built **real-time backend applications** to support a new trading desk executing a **\$100 million proprietary trading strategy**

### Wish • Data and Relevancy Engineer • Summer 2019

*Go, Python, Redis, Bash, Presto/Hive*

- Implemented centralized **Redis feature store** which **reduced memory usage** on **52 EC2 instances** by **75%**
- **Reduced** request **latency** by **90%** by caching model weights and multithreading feature computation
- Added **new features** to the product ranking model to **increase GMV** (gross merchandise value) by **3%**

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

*Java, Bash, Apache Lucene, 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 • Winter 2018

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

- Engineered alerts application to reduce account takeover fraud loss by **\$2.5 million**
- 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 visualization frameworks to build an **interactive dashboard**
- Built a **deep learning model** using **TensorFlow** in order to identify new features for the fraud detection model

### National Instruments • Software Developer • Spring 2017

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

- 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