

**Skills** | Python • C++ • JavaScript • C • Go • Node.js • TensorFlow • Docker • AWS • Scala • Cassandra • Kafka

## experience

### Asana

Security Engineering Intern

San Francisco, California

Sept 2019 - Dec 2019

- Reduced the number of employees with **production ssh access** by **75%** by deploying **isolated role machines**
- Automated **vulnerability scanning** in AWS EC2 and Github, triaging based on CVSS scores & attack vector
- Led **AWS Lambda deployment** infrastructure overhaul and **org-wide initiative** to adopt serverless architecture

### Bloomberg LP

Fixed Income Data Platform Engineering Intern

New York City, New York

Jan 2019 - Apr 2019

- Drafted, proposed, and built a **distributed data pipeline** to populate **2500 fields × 40 million bond updates** per day with sub second latency, orchestrating services on 150+ machines using Kafka and Cassandra layers
- Built clustering based **recommendation engine** for finding comparable bonds on the Bloomberg Terminal
- Wrote Cassandra module for Python w/ C++ extensions for **10x lower latency** compared to official Py3 driver

### Hive AI

Core ML Infrastructure Intern

San Francisco, California

May 2018 - Aug 2018

- Designed a **distributed Tensorflow platform**, allowing models to be trained in 1/24th the time across 8 servers
- Led development of C++ real-time **face recognition pipeline** on **16+ concurrent video streams**. Combined **face detection, keypointing and embedding** models with OpenCV processing to reach **95%** recog accuracy
- Implemented optimized **vector kNN** algorithm to search indices with **100k facial embeddings** in under 50ms
- Built thread safe C++ **GPU memory manager** to handle 1000+ parallel RPC calls to TensorFlow model server

### Waterloop Hyperloop Design Team

Communications Software Co-Lead

Waterloo, Ontario

Sept 2017 - March 2018

- Spearheaded **data pipeline design** for three way communication between pod, relay servers and pilot controls
- Wrote multiplexed rUDP library in **Go** to increase data throughput by **50x** and reduce latency by **90%**

### dominknow Learning Systems

Software Developer Intern

Ottawa, Ontario

Jun 2016 - Aug 2017

- Built software simulation platform in **Java**, featuring linear-time **version control** for **Elasticsearch** documents
- Automated **LESS compilation** for authoring platform, also optimizing compilation for a speedup of **500%**

## projects

### Order AI

Jan 2018 - Aug 2019

- Led engineering and product design of **conversational agent** startup backed by restaurants in Toronto, participated in **NextAI & Y Combinator Startup School**; setup infra and built end-to-end MVP for client demo

## education

### University of Waterloo

Software Engineering Class of 2022

- 3.9/4.0 cGPA

## achievements

2019 Bloomberg Codecon Global Finalist

2017 HackerRank 97th Percentile Contest Rating

2017 USA Computing Olympiad Platinum Division