

skills

Python • C++ • C • Javascript • Go • Node.js • TensorFlow • OpenCV • Docker • HTML/CSS

experience

Hive.AI

San Francisco, California

Software Engineering Intern

May 2018 - Aug 2018

- Led development of **real-time C++ face detection** for parallel video streams, worked with ML team to integrate and optimize **facial detection, keypointing and embedding** models to achieve >XX% accuracy
- Built and optimized **vector kNN search** algorithm for inference with **100k+ embedding facial index** in <50ms
- Built thread safe C++ **GPU memory manager** to handle 1000+ parallel RPC calls to Tensorflow model server
- Implemented **gRPC** service for dynamic swapping of Tensorflow serving models

dominKnow Learning Systems

Ottawa, Ontario

Software Developer Intern

Jun 2016 - Aug 2017

- Built software simulation platform in **Java**, featuring linear-time **version control** for **Elasticsearch** documents
- Automated **LESS compilation** and increased compilation speeds by **500%** through native code

Waterloop Hyperloop Design Team

Waterloo, Ontario

Communications Software Co-Lead

Sept 2017 - March 2018

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

University of Ottawa Heart Institute

Ottawa, Ontario

Mobile Development Lead

Feb 2016 - Feb 2017

- **Led development** of pager app to prepare med students for residency by simulating surgical incidents
- Presented at the Canadian Conference on Medical Education & American Association of Surgical Education

projects

Order AI

github.com/shunr/order-ai

- **Conversational agent** platform for takeout backed by restaurants in Waterloo and Toronto
- Built centralized **Node.js** server for speech processing and SIP call routing from each restaurant

Orpheus

github.com/shunr/orpheus

- Machine learning experiment in **Node.js** that trains a **online classification model** to learn individual **music tastes** using interactive feedback to Spotify previews

education

University of Waterloo

Software Engineering Class of 2022

- 91.4/100 GPA (Top Decile)
- Dean's Honors List (All Terms)

achievements

2017 HackerRank 97th Percentile

2017 USA Computing Olympiad Platinum Division

2017 Waterloo President's Scholarship of Distinction

2017 ECOO Programming Contest Eastern Ontario
Champion