

Shun Rao



syrael@uwaterloo.ca



(514) 690-6538



github.com/shunr



devpost.com/shunr

experience

Team Waterloo

Waterloo, ON

Communications Software Co-Lead

Sept 2017 - Present

- Spearheading design of new safety critical communications architecture for Goose III, Canada's only Hyperloop Competition 3 pod
- Developing a **multiplexed QUIC pipeline** in **Go** to increase data throughput by up to **50x** and reduce transmission latency by **90%** compared to Goose II

dominKnow Learning Systems

Ottawa, ON

Software Developer Intern

Jun 2016 - Aug 2017

- Developed **full-stack** solutions for an industry leading e-learning platform
- Drafted and implemented **linear-time JSON diff** version control system
- Led development of a **HTML5 image editor** for main authoring product
- Automated a **LESS theming engine** with optimizations to increase compilation speeds by **500%**

University of Ottawa Heart Institute

Ottawa, ON

Mobile Development Lead

Feb 2016 - Feb 2017

- **Led cross-platform development** of pager app to prepare med students for residency by simulating surgical incidents
- Managed cloud storage and processing of responses through **Firebase**
- Project presented at the **Canadian Conference on Medical Education** and the **American Association of Surgical Education**

projects

Fluxnote

Node.js

devpost.com/software/fluxnote

3rd Place @ ECHacks

- Web app that uses a phone to turn any surface into a graphics tablet using 3-axis magnetic field strength data, for paperless note-taking.

Orpheus

Node.js, Python

github.com/shunr/orpheus

Personal

- Machine learning experiment that trains an online classification model to learn individual music tastes using interactive feedback to Spotify previews

Finden

Node.js, React Native

devpost.com/software/finden

Hack The North

- Massively multiplayer scavenger hunt built using IBM Image Recognition API
- Users compete on a global leaderboard by scanning targets with their phone

muBot

Python

github.com/shunr/mubot

SE101 Final Project

- Raspberry Pi robot that dances to any song from Youtube
- Performs parallelized FFT beat detection on audio while dancing

skills

Fluent

Python, Javascript, Node.js, C++, Git, HTML5, Linux

Working Proficiency

C, Java, Go, jQuery, MongoDB

Getting There

Tensorflow, React, Android

accomplishments

- 2017 HackerRank 97th Percentile
- 2017 USA Computing Olympiad Platinum Division
- 2017 Waterloo President's Scholarship of Distinction
- 2017 ECOO Programming Contest Eastern Ontario Champion
- 2016 Canadian Federation of Medical Students Student Initiative Grant
- 2016 CCC Certificate of Distinction
- 2015 TechU.me Ottawa AppJam Winner
- 2015 OSSTF Student Achievement Awards, Provincial Winner

education

University of Waterloo

Candidate for Bachelor of Software Engineering

2017 - 2022

- 3.98 GPA
- Term Dean's Honors List