

Shun Rao



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(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. Uses feedback to Spotify previews to estimate likelihood of genre and track preference.

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. Fetches YouTube audio and performs rFFT beat detection on transcoded audio, triggering nutty LED flashes and servo movements.

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