

Shun Rao



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github.com/shunr



devpost.com/shunr

experience

dominKnow Learning Systems

Ottawa, ON

Software Developer Intern

Jun 2016 - Aug 2017

- Led full-stack development of a HTML5 **software simulation** platform with **Java** (Spring) and **Elasticsearch**
- Drafted and implemented **linear-time JSON diff** version control system
- Automated a **LESS theming engine** with optimizations to increase compilation speeds by **500%**

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

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

Elasticsearch, Tensorflow, Android, VOIP

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