

Shun Rao

syrao@uwaterloo.ca • (514) 690-6538 • github.com/shunr

experience

Team Waterloo

Waterloo, ON

Communications Systems Engineer

Sept 2017 - Present

- Designing safety critical onboard systems for a better, faster Hyperloop Competition 3 pod
- Writing a low-latency, multiplexed UDP pipeline in Go using QUIC protocol to relay pod commands and sensor data

dominKnow Learning Systems

Ottawa, ON

Software Developer

Jun 2016 - Aug 2017

- Developed full stack e-learning & authoring solutions in Java for corporate clients.
- Drafted and wrote efficient cloud authoring version control system using JSON diff comparison
- Led the development of a HTML5 asset editor with ColdFusion server logic and JS canvas manipulation.
- Built an automated LESS theming engine and implemented optimizations to increase compilation speeds by 500%

University of Ottawa Heart Institute

Ottawa, ON

Development Lead

Feb 2016 - Feb 2017

- Led iOS development of pager app to prepares med students for residency by simulating surgical incidents.
- Managed Firebase backend for secure cloud storage of responses
- 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

Affordable alternative to graphics tablets using raw 3-axis magnetic field strength data from a smartphone to write with a rare-earth magnet, creating a paperless note-taking and scribbling system.

Finden

Node.js, React Native

devpost.com/software/finden

Hack The North

Massively multiplayer scavenger hunt platform built at Hack The North using IBM Watson Image Recognition API. Users compete on a global leaderboard by scanning target objects with their phone.

Orpheus

Node.js, Python

github.com/shunr/orpheus

Personal

Interactive machine learning experiment that trains an online classification model to learn individual music tastes. Uses user feedback to 30-second Spotify previews to estimate likelihood of genre and track preference.

Code Curator

Python

github.com/shunr/code-curator

Personal

Utility to intelligently crawl contest sites and generate indexed repositories of personal code submitted to competitive programming platforms.

education

University of Waterloo

2017 - 2022

Candidate for Bachelor of Software Engineering

skills

Languages

C++, Python, Java, Javascript, C, Go

Frameworks/Tools

Node, Git, MongoDB, Angular, Mercurial, Jira, ColdFusion, Firebase, jQuery

Other

HTML5, CSS3

accomplishments

2017 HackerRank 97th Percentile

2017 Waterloo President's Scholarship of Distinction

2017 USA Computing Olympiad Platinum Division

2017 ECOO Programming Contest Eastern Ontario Champion

2017 CCC Certificate of Distinction

2016 Canadian Federation of Medical Students Student Initiative Grant

2016 CCC Certificate of Distinction

2016 Colonel By Coding Club Co-Founder

2015 TechU.me Ottawa AppJam Winner

2015 OSSTF Student Achievement Awards, Provincial Winner