Sav Sidorov

savsidorov.com · sav.sidorov1@gmail.com · linkedin.com/in/savsidorov · github.com/savsidorov

EDUCATION

University of British Columbia, Vancouver, British Columbia — Sept 2017 - Apr 2023
Bachelor of Applied Science (BASc) in Electrical Engineering

WORK EXPERIENCE

Qualia Research Institute, San Francisco, California — June 2021 - Aug 2021
Research Volunteer, Acoustics

- Built optimized processing pipeline for generating spectrograms & chroma features from Julia sets in order to gain new insights into their sonic properties (Python, Google Colab)
- Implemented a customizable Risset rhythm generator, enabling generation of audio for use in full-body haptic interface to induce desired states of consciousness – a.k.a. qualia (MATLAB)

Unico Power, Calgary, Alberta — Dec 2020 - Feb 2021
Software Development Intern

- Implemented the Open Charge Point communication protocol for EV smart charging units in C++ (prototyped implementation on an ESP32)
- Debugged and patched production software on 12 smart charging devices on-site, restoring full charge coverage per apartment building

General Dynamics Mission Systems, Calgary, Alberta — May 2018 - Aug 2018
Software Development Intern

- Built comprehensive hardware and software test cases for 5+ product suite communication devices, increasing average test coverage by ~25% to improve quality control (LabVIEW, JIRA)
- Testing efforts achieved 10% lower expected production failure rate

General Dynamics Mission Systems, Calgary, Alberta — May 2017 - Aug 2017
Software Development Intern

- Automated testing of in-development communication equipment, reducing test time by 75% by implementing Robot Framework test automation and allowing tests to be run through the night (LabVIEW, JIRA)
- Efforts produced savings of 160+ engineering hours per month

UniTech Canada Youth Robotics Club, Wuhan, Hubei — May 2019 - Dec 2019
Co-op Instructor & Curriculum Designer

- Developed and implemented a rigorous curriculum to teach middle school aged students electronics and coding, utilizing the Raspberry Pi ecosystem
- Taught Canadian high school math and physics curricula; 16 of my students achieved 85% or greater scores in testing, with an average improvement of >20% in my student's grades

PROJECTS

Playfair — July 2022 - present
Mathematica-like web platform for STEM problem-solving

- Implemented mathematical libraries that support a wide range of operations
- Tech stack: SvelteKit, Next.js, Node.js, Firebase, TypeScript

Noise Detector & Classifier — Sept 2022 - Apr 2023
Capstone (ELEC 491) Project for Breeze Traffic

- Implemented high accuracy real-time audio classification transformer model in a group of 5
- Roles: audio recording, processing, metric calculation, integration of components, ML model research and selection (Python)

ByteCycler — Dec 2018 - Mar 2020
Crowdsourced graphs of media discourse on current events

- Built full-stack web app and onboarded over 50+ users
- Tech stack: React, Node.js, Express, SQL, Django, Azure, Javascript

UBC Formula Electric, Vancouver, British Columbia — Oct 2018 - Apr 2019

- PCB prototyping, schematic design (Altium), testing, and implementation of brake light module, increasing safety and ensuring regulatory compliance
- Team's first car achieved 7th place overall from 45 International Society of Automobile Engineers (SAE) teams at Formula North 2018

FIRST Robotics Team 5897, Calgary, Alberta — June 2015 - May 2017

- Led a team of 30 to build robots (2016, 2017) to compete at international venues (including world championship), ranking 6th out 50 teams regionally
- Wrote self-driving and teleoperating code in Java with one other team member