Kol Crooks

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Interested in Full-Stack Development and Machine Learning

WORK EXPERIENCE

DURACELL | R&D Software Development Intern — Bethel, CT | June 2021 – Present

- Designed and led project for an internal tooling website using **React** and **TypeScript**, that utilized a **MSSQL** to manage users, and to automatically generate web pages based on user generated content.
- Created a deployment pipeline utilizing GitHub and git webhooks.
- Implemented authentication through **Azure**, and implemented authenticated server to server communication through custom generated tokens.
- Created video processing algorithms for measuring information about objects in high-speed video in **Python** with **OpenCV** and **SciPy** to quantify inaccuracies in the measurements.

YALE BIOMEDICAL RESEARCH LAB | Software Development Intern — New Haven, CT | Summers of 2018 and 2019

- Involved in the creation of a PWA for MRI scan analysis that offered a better UI, and better functioning tools than an older system.
- Created volume rendering modules using **vtk.js**, and internal data formats.
- Ported C based MRI scan smoothing algorithm to the web.
- Responsible for data visualization and analysis tools using **d3.js**, created data formats for saving data on these tools.

BULLETIN SOFTWARE | Co-Founder — Redding, CT | Sep 2017 - Apr 2021

- Lead product development and set realistic goals for product direction.
- Integrated the product with existing platforms like google classroom, and used **AWS** as the host platform. Used **React**, **Typescript**, **GraphQL**, **Express**, and **Postgresql** as the core stack technologies.
- Created a web app (**PWA**) for viewing grades that over 70% of my high school used (700 Unique users). It used **Vue** for the front end and **Azure** as the host platform.
- Performed market research by creating focus groups with demographics that the product was intended for.

EDUCATION

BSc. Combined Major in Computer Science and Statistics — Vancouver, BC | Sep 2020 - Present
University of British Columbia

PROJECTS

REAL TIME ASL TRANSCRIPTION NEURAL NETWORK — Python, Javascript, C#
An algorithm designed to transcribe American Sign Language in real time. Utilized **Tensorflow** for model training, and **Electron** for client UI. It was created as part of a highschool research project, and won multiple awards at science fairs, with the highest being second place at the CT-Stem Fair in 2018.

STOCK TRADER AI — Python
A reinforcement learning based AI created with **Tensorflow** that attempted to trade stocks. It had varied success and was overall an interesting project.

OPEN SCHOOL — Typescript
This was supposed to function as the Wikipedia equivalent of Khan Academy. The idea behind it is that users could create topics, and upload content that would enable students to learn different topics in the way that Khan Academy does. The stack was built with **React**, **Nextjs**, and **MongoDB**. This was created for the SigmaHacks 2021 Summer Hackathon.

SKILLS

Languages: Javascript/Typescript, Python, C#, Java, R, Rust, C++, C
Web Technology: React, Vue, GraphQL, Nextjs, Express
Databases: SQL, PostgreSQL, MongoDB
Technology: Tensorflow, OpenCV, AWS, Azure, Docker, Git