Rock Zhou

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Skills

Languages

JavaScript
Python
C/C++
Racket (Scheme)
MATLAB/Octave

Web Development

NodeJS + Express.js
React/Redux
Mocha/Chai
AngularJS
nginx
Flask
Vue

Data/Machine Learning

SQL (PostgreSQL)
MongoDB
NumPy, Pandas
PyTorch
scikit-learn
TensorFlow/Keras

DevOps

Git
Unix
Docker/Kubernetes
AWS S3, EBS, CloudFront
TravisCI
Jira
Google Cloud Platform

Education

University of Waterloo   2017-2022
Bachelor's of Computer Science
3.6 GPA

Interests

Rocket League
Mechanical Keyboards
Music
Fitness
Photography

Experience

Software Engineer
KitchenMate

Sep 2019 — Present
Toronto, ON

- **Increased weekly average users by 5%** by building a C2C2B referral program
- **Decreased weekly food waste by 10%** by creating a historical analysis tool in Jupyter Notebooks to evaluate inventory prediction scripts
- **Improved customer satisfaction** and **saved 10 manhours/week** by analyzing meal success metrics and implementing a menu generation algorithm

Fullstack Developer
ConsenSys

Jan 2019 — Apr 2019
Remote

- **Reduced test execution time by 95%** by stubbing database calls in integration tests and increasing unit test coverage
- Improved frontend test coverage with Jest snapshot and pixel-match tests
- Built clean architecture endpoints over existing Node/Express API, allowing for framework-agnostic business logic and increasing developer efficiency

Frontend Developer
ConsenSys

May 2018 — Aug 2018
Waterloo, ON

- Built out application for tokenizing real estate on Ethereum using Web3.js
- Trimmed notification latency by 50% by optimizing Redux/Stream.js integration
- Produced extensible React components such as dropdown menus and a ChartJS wrapper

Projects

Doggin' Dog GAN   dogs.rockzhou.com
Aug 2019

- Trained and optimized a DCGAN on the Stanford Dog Image dataset, creating a CNN for generating, discriminating, and encoding images
- Created Flask API, nginx server, and React app with user feedback for online learning
- Deployed with Docker/docker-compose, AWS ElasticBeanstalk and CloudFront

EEG Seizure Classification   https://github.com/rocky1638/eeg-seizure-detection   May 2020

- Classified seizures through EEG frequency data, using transfer learning with ResNet for the Neureka 2020 competition
- Preprocessed data using Numpy and Pytorch, using STFT (Short Term Fourier Transform) to extract frequencies and amplitudes, creating freq/time heatmap for CNN input
- Achieved classification accuracy of 70%, placing 4th in the competition

FooDIY   github.com/rocky1638/fewd
Sep 2018

- Created a responsive web-app that allows users to post recipes, and conveniently view them while cooking
- Implemented a React/Redux frontend, Postgres/Express backend, AWS S3 image upload

Music Genre Classifier   github.com/rocky1638/music-genre-analysis
Apr 2019

- Designed and trained a fully-connected neural network using TensorFlow/Keras to classify the genre of any MP3 song
- Extracted and constructed input feature vectors from music metadata using Librosa
- Optimized hyperparameters such as learning rate, momentum, and number of neurons using GridSearchCV, achieving 50% test classification accuracy