TYLER CRANMER

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PROFILE

I am a software engineer who has a strong foundation in core computer science principles, data science, and machine learning. With hands-on experience in building full-stack web applications, developing machine learning models, and creating data visualizations, I am well-equipped to tackle a range of technical challenges.

SKILLS

Python, TypeScript, JavaScript, PostgreSQL, MySQL, GraphQL, Solidity, Next.js, React, Node.js, Django, Flask, AWS, Heroku, Docker, Linux, Unix, Bash, Git, GitHub

Certified AWS Solutions Architect Associate

GitHub | LinkedIn | Website

EDUCATION

Bachelor of Science – Applied Computer Science — Aug 2018 - Dec 2022
University of Colorado - Boulder, Colorado

Computer Science I (C++), Data Structures (C++), Intro to Data Science (Python), Data Visualization (Python), Data Mining (Python), Machine Learning (Python), Discrete Structures (Python), Software Tools (Git, Agile, SQL, etc.), Algorithms (Python), Computer Systems (C), Cognitive Science (Theory), Principles of Programming Languages (Scala), Cybersecurity, Calculus I, II and Linear Algebra.
GPA 3.77 – Cum Laude

Bachelor of Science – Exercise Science
Northern Arizona University – Flagstaff, Arizona

WORK EXPERIENCE

Machine Learning Engineer / Software Engineer – More Seconds — Dec 2022 – Present

More Seconds is a web development and digital agency that builds custom solutions for businesses.

- Collected and cleaned developer operation data to create a machine learning regression model that estimated time to completion for specific development tasks to be displayed on the More Second's client project management portal. This was built using Python, XGBoost, CloudFormation, ECS, Docker, S3, SAM CLI and AWS Lambda.
- Developed three different NLP classification models using NLTK, Naïve Bayes and TD-IF to predict the type of web developer tasks, clarification features and its overall complexity for More Seconds project manager portal. Built with Python, Scikit-learn, CloudFormation, ECS, Docker, S3, SAM CLI and AWS Lambda.
- Developed a customized language model using GPT-3 to extract structured information from unstructured client web development requests, enabling automation of developer task creation.
- Configured and implemented Google Analytics 4 for More Second's websites, including setting up conversion data points for measurement and analysis of user behavior and site performance.
- Utilized Hotjar analytics to gather user insights through heatmaps, session recordings, and surveys to optimize website design and improve user experience on More Seconds client project portal.

Software Engineer - Index Coop May 2021 – June 2022
(Companywide layoff)

The Index Coop is a web3 / blockchain company that creates and maintains the words leading crypto index products.

- Active member of the engineering, analytics, and finance pods.
- Built an application hosted on an AWS EC2 Linux instance that automated the collection, recording and calculations of monthly community contributions for the finance pod using Python, SQL, and Google Sheets. Utilized Bash script to deploy webserver to AWS.
- Was part of a two-man engineering group that was tasked to build an analytic tool called a subgraph, which collected and recorded all on chain data that pertained to the company's index products. This tool was built using GraphQL and TypeScript.
- Created technical documentation on Solidity, Web3.js and Hardhat.
- Contributed to the creation of the engineering on-boarding process for new developers.

FEATURED ENGINEERING PROJECTS

Links to each project's codebase is located at www.teewhy.xyz

Machine Learning Recommendation System
Built a content-based movie recommendation system using multiple machine learning and natural language processing (NLP) techniques. I utilized a data set of over 8000 Netflix Movie and TV shows to create a feature matrix that was used to compute multiple similarity metric scores for each data point. I personally coded two machine learning models and compared them to pre-built ML models.

Technologies: Python, NumPy, Matplotlib, Pandas, Scikit-learn, NLTK

Credit Card Default Predictor
Analyzed a multivariate data set that consisted of customers credit card information and payments over a 6-month period. This data was used to compare multiple machine learning algorithm performances on predicting if customers would default on their credit card payments. ML Models: Logistic Regression w/ and w/o Grid Search, Decision Tree Classifier w/ and w/o Grid search, Adaptive Boost Classifier w/ Decision Tree, and Random Forest Classifier w/ and w/o Grid Search.

Technologies: Python, Pandas, NumPy, Scikit-learn, Seaborn, Matplotlib

CNN Image Classifier
I built a Convolution Neural Network to classify various NFT pictures into their respected collections. This project utilized 6000 pictures from 6 different NFT collections to train and test multiple deep learning models. I was able to build a model that had an accuracy rate of 99%.

Technologies: Python, TensorFlow, Keras, Matplotlib, NumPy

Medical Treatment Costs
I worked on a project analyzing medical treatment costs using a dataset of patient information, including age, sex, BMI, number of children, smoking status, and region of residence. I conducted exploratory data analysis to identify potential factors contributing to higher treatment costs and developed a regression model that accurately predicted patient costs based on these features. Through this project, I gained experience in data analysis, feature selection, and regression modeling techniques.

Technologies: Python, Pandas, NumPy, Scikit-learn, Seaborn

Quizzex
As a member of a 4-person team, I contributed to the development of a digital flashcard web application designed to assist students in their learning and preparation for coursework. Using Flask and Python for the backend, JavaScript for the frontend, and a MySQL database, we created a comprehensive and user-friendly platform for students to utilize as a study aid. Utilized PyTest framework for automating the testing of key Python components that were essential to Quizzex functionality.

Technologies: Python, JavaScript, MySQL, HTML5, CSS3, Heroku