Tyler Cranmer

Software Engineer

Profile

Recent graduate from the University of Colorado at Boulder, where I obtained a bachelors in Applied Computer Science. My degree focused on core computer science principles, data science and machine learning. I am adequate in building full stack web applications with typescript and python. My senior year was spent working part time at the Index Coop building web3 applications while finishing my degree.

Education

Bachelor of Science - Applied Computer Science, University of Colorado at Boulder, Boulder

August 2018 — August 2022

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, Heroku, etc.), Algorithms (Python), Computer Systems (C), Cognitive Science (Theory), Principles of Programming Languages (Scala), Cybersecurity, Calculus I, II and Linear Algebra.

GPA: 3.77

Bachelor of Science - Kinesiology / Exercise Science, Northern Arizona University, Flagstaff

Work Experience

Software Engineer at Index Coop

May 2021 — May 2022

Index Coop is a DAO that creates and maintains the world's top crypto index products. I was an active member of the engineering, wizardry, analytic and finance pods. I contributed to Index Coop's open source projects.

- Automated the collection, recording and calculations of community monthly contributions for the finance pods.
- Developed Index Coops subgraph.
- Created technical documentation on solidity, web3.js and hardhat.
- Contributed to the creation of the engineering on-boarding process for new developers.
- Helped develop the Engineering Bronze Owl Quest for new solidity developers.
- Created technical documentation about solidity for on boarding new engineers.

Details

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Nationality

US Citizen

Links

GitHub
LinkedIn
Portfolio

Skills

- Python
- JavaScript
- Typescript
- React
- Next.js
- Node.js
- Django
- Flask
- HardHat
- Ethers.js
- Solidity
- GraphQL
- SQL

★ Development Projects

ML Recommendation System

2022

I 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 matrices 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, Tfidvectorizor, linear_kernal, nltk

Credit Card Default Predictor

2022

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 Classifier w/ and w/o Grid Search
- Decision Tree Classifier w/ and w/o Grid Search
- Adaptive Boost Classifier w/ Decision Tree
- Random Forest Classifier w/ and w/o Grid Search

Technologies: Python, Pandas, Numpy, Sklearn, Seaborn, Matplotlib

CNN Image Classifier

2022

I built a Convolution Neural Network to classify different 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, Metplotlib, Numpy

Housing Price Predictor

2020

Participated in a National Public Data Science Competition on using advanced regression techniques to predict housing prices.

- Utilized multiple Machine Learning Regression Models (i.e Linear Regression, Gradient Boosting and XgBoost) to accurately predict housing prices with a Root Mean Squared Error score of 0.12233.
- Developed the entire predictive model using Python, Pandas, Numpy, and Sklearn.
- Performed data inspection, cleaning and analysis of 2921 houses with 81 categorical variables.
- Scored in the top 15% of competitors.

Technologies: Python, Pandas, Numpy, Sklearn, Seaborn, Matplotlib

Index Coop Subgraph

2021

Was apart of a two man team that develop the Index Coop's Subgraph. The purpose of the Subgraph was to capture data that pertains to the issuance of new tokens, balancing underlying assets, transfers, internal fees, transactions and gas costs. This data will be used by the Analytic Working Group to better understand the companies costs.

Technologies: The Graph Protocol, GraphQL, TypeScript / AssemblyScript, IPFS, Solidity

Contribution Management Platform

2022

Built a full stack application for recording 150-200 contributors work each month for the Index Coop. This application allowed Index Coop's contributors to submit their completed jobs on a google sheet and be recorded within the discord channel. The application would sort each contributor's information into the correct working group and post the data onto a master finance sheet for the finance director to review.

Technologies: Python, SQL, Discord API, Google Cloud API, Google Sheets API

NFT Project

2022

I was hired to develop and deployed a NFT collection to the Ethereum network. I built a full stack application with a React front end and utilized Ethers.js to allow users to mint their NFTs. The smart contracts were built, tested and deployed with Hardhat and Solidity. I built a layered picture generator utilizing Python and Pillow to generate the collection of over 6K NFT pictures and their metadata.

Technologies: Python, Pillow, Solidity, React, JavaScript, Ethers.js, Hardhat, IPFS

Solidity Projects

2021 — 2022

- Decentralized Exchange
- Multisig Wallets
- OnChain Mediation Platform
- Crypto Management Vaults
- Fullstack ERC20 token Crowd Sell
- Supply Chain Management Platform

Technologies: Solidity, Hardhat, Ethers.js, Javascript, Typescript

Check out my github for more projects

References

References available upon request