Haotian Xu

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EDUCATION

University of Southern California, Viterbi School of Engineering Los Angeles, CA
B.S. in Electrical Engineering, GPA: 3.92/4. Minor in Applied Analytics Expected May 2023

- **Core Courses:** Applied Machine Learning, Database, Distributed System, Parallel and Distributed Computation, Embedded System, Data Structure, Probability, Enterprise Data Analytics
- **Honors:** Dean's List (4 semesters), Honorable Mention in MCM

SKILLS

- **Programming Skills:** Python, Pytorch, Tensorflow, SQL, NoSQL, C++, MATLAB, Web Scraping, Javascript, React, Verilog
- **Software Skills**: Tableau, MongoDB, SAS, MySQL
- **Modeling Knowledge:** Linear Regression, Logistic Regression, SVM, Random Forest, XGBoost, DNN, CNN, LSTM, Transfer Learning

EXPERIENCE

StartInvest Apr 2022 - present
Engineering Intern

- Developed the company website using React, AWS Amplify, AWS S3, and Material UI framework. The responsibilities include writing forms to receive users' inputs and files, processing input data, and designing UI.
- Developed API to publish Ads on third-party platforms from users' inputs in the front-end using Python, AWS Amplify, and React.

PROJECTS

Grids Mindspark Hackathon Apr 2022

- Designed and made an emotion recognition and recommendation system product to recognize users' emotions and give some recommendations (music, books, movies, etc) to help them relax. Chose this idea in an attempt to improve people's mental health in the workplace.
- Built a multi-model system to recognize emotions, including an image classification model using Fer2013 dataset and Xception structure and a speech sentiment analysis model using pre-trained models. Built an XGBoost classifier to assign songs to different emotion labels. Gave recommendations after recognizing users' emotions.
- Deployed the entire system on the web application and got good testing results.

Shake Shack's Sales Prediction with New York's MTA Data Jan - Feb 2022

- Approximately predicted Shake Shack's sales using only New York's MTA data.
- Extracted geographic and behavior data via web-scraping with Requests and BeautifulSoup libraries. Conducted data wrangling and formatting. Merged Shake Shack's open stores and metro stations tables based on locale information.
- Conducted data preprocessing, including outliers detection and removal, data imputation, and feature engineering. Wrote a python script to automatically identify store-nearby metro stations. Conducted data annotation with quarterly customer traffic. Made statistical inference to country-wise station traffic based on New York historical data.
- Built regression models (Linear Regression, Random Forest, LightGBM, XGBoost) to predict Shake Shack's sales revenue in the next quarter. Conducted hyper-parameters tuning and model selection. The XGBoost Model got the closest results.

Marshall Data Analytics Competition Nov 2021
Winner Group and Team Leader

- Got the Winner of the competition through modeling skills and performance.
- Conducted data preprocessing to Maersk 2021 global shipping data, including data imputation, outliers detection and removal, and feature engineering. Performed Exploratory Data Analysis (EDA). Visualized feature distribution and correlations.
- Trained models (Linear Regression, Random Forest, LightGBM) to predict merchandise shipping time and port turnaround time. Ran cross-validation to do hyper-parameter tuning and model selection. Gained 0.89 R-squared on the test set with LightGBM.
- Ran tree-based feature importance ranking. Presented stakeholders with the ranking result, routing Tableau dashboard, and shipping optimization strategy.

ACTIVITIES

Clubs and Involvements: Data Science Club, Google Developer Student Club – USC, Blockchain@USC
Tsinghua University Top EE Program, Exchange student Beijing, China, Feb - Jun 2021

- Took EE courses at Tsinghua University. Participated in their extracurricular activities.
- Visited renowned laboratories and discussed with their professors and researchers in the university.