ZEYANG (Zack) LAI

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EDUCATION

Rutgers University - Newark — **Newark, NY**
Master of Information Technology and Analytics. — *Expected Dec 2021*
UC San Diego Extension Coding Boot Camp — **San Diego, CA**
Full-Stack Web Development — *Expected Dec 2021*
Pennsylvania State University — **University Park, PA**
Bachelor of Science in Electrical Engineering — *Conferred May 2020*

SKILLS

Programming: Python, Java, JavaScript, C++, R, Typescript, HTML, CSS, MySQL, MATLAB
Skills: Web Scraping, Git, Shell, Bash, Postman, Firebase
Framework related: Angular, Node.js, React, Django, MongoDB
Related Courses: Data Structure & Algorithms, Computer Vision, Reinforcement Learning, Discrete Optimization

PROJECTS

Full Stack Web Development Utilized Self-Built Server-side API| *HTML, JavaScript,MySQL* *Oct – Nov 2021*

- Designed a web app that generates a random answer for user's question.
- Implemented **RESTful APIs** with **Express.js** and **Sequelize**
- Dveloped **MVC** structured back-end server powered by **Node.js** and front-end app by **handlebar.js** and **MDBoostrap**
- Added user signup and login features and store all the user data into relational tables **in MySQL**
- Added history feature that allows users to view their previous questions and the answer to the questions.

Web Application For Commute Time Estimation | *HTML, CSS, JavaScript* *Sept – Oct 2021*

- Created a web app that allows user to search for average commute time and real-time air quality index by inputting zip code
- Connected the page web app to airnow.gov and the Census Bureau, pulled both static and live data using **JavaScript**
- Optimized the app to be mobile responsive across PC, tablet, and mobile phones via **Materialize.CSS**

New York State Taxi Duration & Incidence Prediction | *Python, Tableau* *Jun – Aug 2021*

- Analyzed and visualized the incident and the taxi duration data of New York by **Python (Pandas, NumPy, Matplotlib)** and **Tableau.**
- Implemented A Star algorithm to find the relation between decreasing the collision probabilities and increasing the length of origin-destination pairs.

Forward and Inverse Camera Projection | *MATLAB* *Oct – Dec 2019*

- Projected 3D coordinates to 2D coordinates and plot them on the Frame images using **MATLAB**
- Extracted frame to obtain x,y,z coordinates as the world coordinates and used the values from cameras to triangulate the viewing rays of the camera views to recover original 3D coordinates
- Designed and implemented the algorithm to compute and track the epipolar lines in the frame image

PROFESSIONAL EXPERIENCE

Midea Group — **Foshan, China**
Business Analyst Intern — *May 2019 – Aug 2019*

- Wrote and ran SQL queries based on criteria given by supervisors, performed data processing to retrieve and clean over 1 million rows of data from the cloud server
- Led a team of five to conducted descriptive analysis to understand data distribution pattern using R
- Facilitated the classification modeling process by validating the models using multiple test sets, and generated validation reports that included suggestions on parameter fine-tuning

Dr. Technology co. — **Guangzhou, China**
Data Analysis & Engineering Intern — *Jun 2018 – Aug 2018*

- Built up salesmen performance model and found visiting abnormal value by using KNN which achieved 91% accuracy
- Built up a binary classification model with Decision Tree to predict the probability of purchasing in next month, which achieved 93% accuracy and improved the sales revenue by 22%
- Produced monthly customers analysis reports and dashboards using Tableau to help company to compare performance with previous months and developed new business strategies