Wenzhe Luo

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Last semester master student in GMU with main focuses on Computer Engineering and Machine Learning. Currently have hand-on experiences in Full Stack Development and Machine Learning. Seek a Software Engineer (SDE) & Full Stack engineer.

EDUCATION

Master of Science: Computer Engineering (GPA: 3.83/4.00) 01/2021 – 05/2023
George Mason University
- **Concentration:** Machine Learning and Computer Engineering (MLCE)
- **Courses:** *Big Data Technologies, Computer Network Architecture and Protocol, Neuromorphic Computing, Advanced Mobile Systems and Applications, Machine Learning for Embedded Systems, Internet of Things (IoT)*

Bachelor of Science: Electrical Engineering and Automation (GPA: 86.4/100) 09/2013 – 06/2017
Guangzhou College of South China University of Technology
Honor: Outstanding undergraduate (First-class Scholarship)
- ***Courses:*** *Advanced Language Programming I (C++)*

PROFESSIONAL EXPERIENCE

Software engineer, Intern 09/2022 – present
Meetfood Vienna, United States
- Developed object-oriented code in **Node.js** with 100% accordance with company standards, Designed user and activity database using **MongoDB** and deployed it onto mLab to ensure App's stability and persistency;
- Improved user interfaces with modern JavaScript frameworks, **HTML5**, and **CSS3**, used **AWS Cognito** to manage and authenticate user and identity;
- Updated 4 versions of the Me page to use **JavaScript** framework **React.js** to provide user profile cards
- Worked within an agile team to improve **Restful API design**: User APIs, and Video APIs

Lab in ECE of GMU (Research Assistant) 04/2022 – 05/2022
Fairfax, United States
- Researched ML methods to realize 7 different *Neural architectures* affect fairness for *Skin-Image Search*
- Implemented **Scikit learn** and **Matplotlib**, compared to **PCA** in visualizing dermatology datasets by using **t-SNE**

PROJECTS

Web App - Elevator Booking List (Independent) 01/2023 – present
Built a Web App for residents in Adaire apartment to apply for using elevator and deployed the App to the Cloud
- Designed and established a user-friendly website by using ***Streamlit*** based on ***Python***, including an optimized elevator-booking list and email-sending page;
- Built a elevators using predictive model, reviewed and developed data by using **pandas** and cleaned data by setting from .txt/ file to .xlsx/ file resulting in a decrease in the squeeze of elevator usage of *65%*;
- Deployed the web App in the cloud through **Heroku (PaaS)**, and worked closely with the apartment front desk to publish daily forecast elevator usage in order to optimize and increase efficiency by *80%*

MERN Stack: Website app for Hotel Reservation system (Independent) 08/2022 – 11/2022
Built a MERN (MongoDB, Express, React (UI design), Node.js)-Stack Website App to allow users to book a hotel
- Designed and created **8 RESTful APIs** using Node.js, and wrote structured, tested, readable code;
- Developed for storing, editing, and deleting user's data in **MongoDB** with **Insomnia**, optimized 3 versions of the *user login module* for functional perfection;
- Used **Bcryptjs** for hashing and storing passwords to enhance user *privacy protection,* completed the entire project using the **oop-library mongoose** with **JavaScript**.

ML: Prediction of NBA team strength in 2023 (independent) 05/2022 – 06/2022
Implemented ML Algorithm to predict the outcome of each game in the ongoing 2022-2023 NBA regular season
- Aggregated data from the web [*basketball-reference*], cleaned data set into CSV format, used **ELO function** to initialize the integrated data and implemented **sklearn**'s Logistic regression method to establish the regression model.
- Optimized data and visualized final results (**matplotlib** and **seaborn**) by comparing to the xGoals decision ML model (applied **Amazon SageMaker** to build, train, and deploy machine learning models)

IoT: Realtime GPS Tracking System (Group Leader) 02/2022 – 04/2022
Created an embedded lightweight device and implemented real-time data transmission with Google Firebase Cloud platform
- Connected 5 components to Arduino Nano 33 IoT and used **Google Firebase** as a Cloud platform;
- Improved the response of the system to ensure that the experimental results are maintained at time-difference within 0.1s and distance error within 5m(based on **C language**);
- Converted data results in txt./ form to Excel table (100% accuracy) by using ***Python***

SKILLS

Programming Languages:
Python, SQL, JavaScript, HTML, CSS, TypeScript

Tools:
PyCharm, VS code, Swagger, Mock, JMeter, Redux, React, Node, Express

Database
NoSQL(MongoDB), SQL

Web Development
Node.js, MongoDB, Git, Spring, Google Firebase, AWS