Yuanhang Zheng

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Education

Rose-Hulman Institute of Technology
Bachelor of Science in Computer Science| GPA: 3.60   Expected May 2023
Coursework: Computer Architecture, Object-Oriented Software Development, Data Structure and Algorithms, Database Systems, Web Programming, Operating Systems, Computer Networks

Skills

Languages: Python, C, Java, JavaScript, HTML, CSS, MISP Assembly
Framework/Libraries: React JS, React Native, Bootstrap, Redux, Node JS, Django, Firebase
Databases: Relational, Non-relational model, SQL, MongoDB
Artificial Intelligence: Machine Learning, Reinforcement Learning, Neural Networks, TensorFlow

Experiences

Rose-Hulman Ventures
Software Intern   October 2020 – May 2021
- Developed a React Native mobile application that allows motor engineers to configure and debug a motor controller by communicating to it via Bluetooth.
- Designed and implemented the application's Bluetooth communication infrastructure with the Bluetooth low energy library to stabilize reading and writing messages and ensure real-time updates.
- Reduced communication latency by 70% and robustly verified read and write operations to avoid data corruption.

TechPoint S.O.S. Challenge (link to repo)
Participant   June 2020 - July 2020
- Collaborated on a multi-disciplinary team to work on a solution in 5 weeks that tackled the challenges faced by the tourism industry due to the COVID-19 pandemic.
- Developed a web application using React JS, Spring Boot, and PostgreSQL that calculates the new maximum capacity for convention rooms according to CDC social distancing guidelines.
- Tracked the current capacity of these rooms with respect to their maximum capacity.

Projects

Surprise Discovery
- Developed a web app for Rose-Hulman students to buy and sell secondhand items with each other.
- Designed the backend database and wrote store procedures and functions for storing and retrieving data.
- Used Node JS to create an API that connected the web page to the SQL database.

Exam Review System
- Created web app where Rose-Hulman students can host and join review sessions to study with each other.
- Utilized Firebase for backend database and hosting and incorporated an authentication system that granted access only to Rose-Hulman Students and faculties.

Question AI
- Built a web application using Django that answers user queries based on the documents they provide.
- Used NTLK library to process and tokenize text documents to rank sentences based on certain metrics.

Traffic Sign Neural Network
- Designed and trained a convolutional neural network using TensorFlow to identify which traffic sign appears in a photograph.
- Trained the model with 1,000 images of 43 different road signs and achieved about 97% accuracy.