Hongyu Li

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Education

University of North Carolina at Chapel Hill May 2021
Bachelor of Science in Computer Science
Bachelor of Science in Environmental Sciences, Concentration in Energy Management
Minor in Entrepreneurship
GPA: 3.7
Related Coursework: Data Structures, Computer Organization, Models of Languages and Computation, Algorithms, Intro to Machine Learning, Artificial Intelligence, Software Architecture, Operating Systems

Technical Skills

Technical Languages: Python, Java, JavaScript, Html/CSS, C, C++, Clojure, SQL
Technologies: Git, MATLAB, Pytorch, Node.JS, Express, React.js, MongoDB, REST, JSON, Unity
Languages: English, Chinese

Work Experience

Student Research Assistant | UNC-Medical School | Chapel Hill, NC November 2019 – Present

- Engaged in a project analyzing patients' muscle and brain signals during post-stroke recovery
- Scripted a **Matlab** application that collects and synchronizes sensor-collected muscle and brain data
- Worked in a team of a professor and students to deliver features of the application through communication and collaboration in an Agile style

Technology Analyst Intern | Credit Suisse | Raleigh, NC July 2020 – August 2020

- Designed and constructed a web-based modeling application for trading volume prediction
- Preprocessed historical trading-volume data and built time-series forecasting models such as AR, SARIMA with **Python, Statsmodel,** and **SQL** to predict anomalies in future trading
- Developed a web-based user interface to visualize data and models with **Python, Dash, HTML/CSS**

Project Manager Intern | UNC Facilities Services | Chapel Hill, NC August 2019 – December 2019

- Launched, designed, and managed an energy-saving competition between two buildings
- Analyzed energy data and other factors of the two buildings, finding a 5% reduction in energy usage
- Constructed a website for campus building competitions using **HTML/CSS/JS, Node.JS, Express, Restful,** and **MongoDB** to present data, methodologies and strategies

Projects

Herbarium Map | Software Engineering Lab August 2020 – Present

- Work in a team of three to design and develop a web-based interactive map showing the access records of plant specimen collections at UNC Herbarium using **React.js, MongoDB** and **Node.js**
- Build the interactive user interface using **React.js** and **Mapbox** to display access information
- Communicate with client and mentor to develop features of the website following Agile methods

Sarcasm Detection | Student Assistant Research May 2020 – August 2020

- Created an NLP program detecting sarcasm in languages using neural network models, such as LSTM, built by **Python, Pytorch** and different libraries including numpy, sklearn, and pandas
- Analyzed the results and improved the model to counter overfitting and underfitting through a Machine Learning model developing cycle that increased accuracy by 10%

Idiot | Software Architecture January 2020 – May 2020

- Developed a simplified version of Git, "a stupid content tracker" called *Idiot*
- Implemented some basic Git commands using **Clojure**: creating objects, storing them in branches, and displaying contents in a web server
- Practiced software design techniques including testing, debugging, and refactoring

Leadership and Activities

UNC RESPC Electric Bus Project | Project Operator October 2018 – June 2019

- Organized project process and communicated research on EVs' cost, service life, and global warming impact with advisors, the university, and the town to get their support for purchasing electric buses