

Liushuai Fan

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EDUCATION

Washington University in St. Louis

Master of Science in Computer Science (GPA 3.82/4.0)

St. Louis, Missouri

Sep. 2021- May 2023

University of Illinois Urbana-Champaign

Bachelor of Mathematics and Actuarial Science (GPA 3.54/4.0)

Champaign, Illinois

Sep. 2017- May 2021

Relevant Coursework: Database Systems, Web Development, Software Engineering, Machine Learning, Data Structures and Algorithms, Video Game Programming, Recent Advances in Computer Security and Privacy, object-oriented programming

WORK EXPERIENCE

Sinica Education

Academic Consultant

Los Angeles, California

July 2023 - Present

- Led the development and deployment of a real-time **Python**-based calendar website on AWS, integrating Google APIs for Salesforce data retrieval and processing, while leveraging **JavaScript** for visualization
- Taught College level computer science and Statistics via online lectures in both one-on-one and small group settings
- Streamlined task management for tutors, replacing manual email checks with instant access to teaching tasks by name input and improving operational efficiency by 60%

Chuwa America

Software developer

St. Louis, Missouri

April 2023 – June 2023

- Developed a social media platform using **React** and **Django**, fostering student-alumni interaction on diverse topics
- Enhanced performance and user experience through flexible state management with **Redux** across components, integrating interactive elements using UI libraries such as Material UI and **Bootstrap**
- Utilized **React hooks**, **Axios**, and **React Router** for efficient data handling and navigation, optimizing application responsiveness, and maintaining an active user base of over 50

ACADEMIC PROJECTS

Credit Risk Assessment

May 2022 – June 2022

- Implemented a **supervised learning** pipeline utilizing machine learning libraries such as **scikit-learn** and TensorFlow to predict credit risk for loan applicants and enabling real-time credit risk assessment for loan applicants
- Optimized model performance through **feature engineering** and **hyperparameter tuning**, utilizing classification algorithms such as **logistic regression** and **random forest**
- Utilized evaluation metrics such as accuracy, precision and F1-score to assess model performance, iteratively improving predictive accuracy while implementing strategies like oversampling and undersampling to address class imbalance

Pacman AI Projects

June 2022 – August 2022

- Completed the comprehensive Pacman AI projects, demonstrating adeptness in implementing advanced search algorithms like **A* search** for efficient pathfinding solutions
- Strategically addressed **adversarial search** challenges, devising effective ghost behavior strategies to optimize Pacman's decision-making in dynamic gaming environments
- Applied **Bayesian network** methodologies to model uncertain scenarios, facilitating probabilistic reasoning and enhancing Pacman's adaptability in complex situations
- Implemented **reinforcement learning** techniques to train Pacman agents, fostering adaptive behavior and continual improvement through interactions within the game environment

Multi-room Chat Server & Multi-user Calendar

Jan 2022 – Feb. 2022

- Engineered a multi-room chat server using Node.JS, enabling simultaneous communication among users
- Created a multi-user calendar frontend with **HTML** and **CSS** to display month-by-month views of the calendar and user events, employing **JavaScript** for user interaction processing on **AWS EC2**
- Developed the backend system with PHP, utilizing AJAX to execute server-side scripts for data queries from the MySQL database, demonstrating adept problem-solving abilities
- Implemented session tokens to ensure website security and utilized prepared statements to mitigate risks from SQL injection, Session Hijacking, XSS, and CSRF attacks

Skills

Technical Skills: JavaScript (React, Vue), Java (Spring framework), Python (NumPy, Sklearn, Keras, TensorFlow), SQL (MySQL, Sqlite3), HTML, CSS, R, C#

Software Technology: Git, AWS, MongoDB, Django, Unity, DynamoDB, Tableau