Xianya Fu

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Education

University of California, Los Angeles Los Angeles, CA
Bachelor of Science in Statistics and Data Science Sep. 2023 – Jun. 2025
Cumulative GPA: 3.99/4.0; Major GPA: 4.0/4.0; Dean's Honors List (2023 Fall, 2024 Spring)

University of California, Santa Barbara Santa Barbara, CA
Double Major in Statistics and Data Science and Applied Mathematics Sep. 2021 – Jun. 2023
Cumulative GPA: 3.98/4.0; Dean's Honors List (2022 Winter, 2023 Winter, 2023 Spring)

Research

A Format-Character Cooperative Recognition Method for Ancient Chinese Books Remote
Research Assistant, Supervisor: Prof. Shijun Liu, Shandong University Jun. 2024 - Present
- Developed a computer-aided collaborative text recognition algorithm specifically designed for the digitization of Chinese ancient books.
- Implemented DP-LinkNet architecture for adaptive binarization to enhance text clarity and reduce image noise in degraded ancient texts.
- Employed a "character-based column determination" strategy alongside the DBNet detection algorithm to accurately identify text regions and exclude non-text elements during layout analysis.
- Applied SVTR LCNet model combining CNN and sparse Transformer for efficient text recognition in resource-constrained environments.
- Conducted experiments that showed significant improvements in character integrity, recognition accuracy, and processing speed compared to conventional methods.

Simulate Seismic Wave Propagation in Complex Geological Media Los Angeles, CA
Research Assistant, Supervisor: Prof. Lingsen Meng, UCLA Mar. 2024 - Present
- Reproduced and adjusted models as the baseline from five research papers related to seismic wave simulation using PINN and neuro operators.
- Participated in weekly meetings to discuss project progress and contributed to innovative optimizations.

Reservoir Digital Twin and Flood Intelligent Decision Analysis Platform Jinan, China
Research Assistant, Supervisor: Prof. Shijun Liu, Shandong University Collaborative Project Mar. 2023 - Sep. 2023
- Constructed the flood prediction model by implementing the linear & cubic interpolation and the flood hydrograph scaling method.
- Conducted error analysis using various statistical measures, including Root Mean Square Error (RMSE), Mean Absolute Error (MAE), Euclidean Distance, and Manhattan Distance.
- Optimized database tables, reduced algorithmic loops, and utilized Flask to enhance performance, reducing runtime to 100ms and improving efficiency by 10 times.

Shandong Big Data Research Association Jinan, China
Research Analyst, Supervisor: Prof. Yufeng Shi Jun. 2021-Dec. 2021
- Contributed to the development of a comprehensive credit evaluation model tailored for tech SMEs.
- Assisted in constructing the indicator system with 110 third-level indicators, which are designed to comprehensively measure all aspects of SMEs.

Employment

SAS Software Co., Ltd Shanghai, China
Analytics Intern, Product Service Delivery Jul. 2024 – Aug. 2024
- Participated in a project for model asset lifecycle and risk management with ICBC.
- Assisted in creating a prototype of the model management platform using Axure.
- Compiled machine learning algorithm parameters from SAS ML Viya into a presentation.

Jinan Allview Information Technology Co. LTD Jinan, China
VR software development Intern Jul. 2022 - Aug. 2022
- Refined and debugged the "Stored Incident" scene, and resolved challenging issues in data modeling and 3D scene rendering capability.
- Ensured the accuracy of physical parameters and the stability of the model by testing with AR.

Projects

Boost or Rest: How Caffeine and Sleep Influence Problem-Solving Jun. 2024
- Designed and implemented a Two-Way Randomized Block Study to evaluate the effects of caffeine intake and nap duration on cognitive problem-solving abilities.
- Conducted data collection and preprocessing, utilizing ANOVA, interaction plots, and Tukey HSD tests to analyze significant effects and interactions.
- Key findings included a statistically significant impact of longer nap durations on problem-solving scores, with caffeine levels showing no substantial influence.
- Validated model assumptions through residual analysis and QQ plots, ensuring statistical rigor.

Data Analysis of Life Expectancy in 2007 Feb. 2024
- Developed and optimized multiple linear regression models to analyze WHO data, identifying key factors like BMI and Hepatitis B vaccination affecting life expectancy.
- Improved model performance by applying transformations and subset selection, increasing adjusted R^2 from 0.40 to 0.49, while addressing multicollinearity and validating assumptions.

Skills

Languages: English (fluent), Chinese (native)
Technical skills: Proficient in R, Java, Python, SQL, Adobe Creative Suite (Audition, Photoshop)