Liyue Zhang

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Education

Johns Hopkins University, Baltimore, US   8/2024 -Present
MSE in Systems Engineering, **GPA: 4.0/4.0**
Relevant coursework: Machine Learning, Data Science, Network Modeling
Ningbo University, Ningbo, China   9/2020-6/2024
B.M. in Information Management and Information System, **Rank: 2/49**, GPA: 3.46/4.0
Relevant coursework: Data Structures & Algorithms, Databases, Statistics, Data Analysis

Project Experience

LLM-based Simulation of Covid-19 Vaccine Attitudes   9/2024-Present
Advisor: Prof. Lauren Gardner
- Built comprehensive datasets integrating vaccine attitudes, demographics, and prior belief factors.
- Applied LLaMA-2-7B and other LLMs to model vaccine decision-making behaviors.

Multi-Pathogen Hospitalization Forecasting Model   9/2024-Present
- Designed a multi-pathogen forecasting model for influenza, RSV, and COVID-19 at state, regional, and national levels.
- **Accomplishment**: Weekly GitHub submissions for real-time validation; Manuscript submitted to *Epidemics* journal.

Disruptive Technology Identification via Multi-Source Data Fusion   3/2023-Present
- Enhanced early-stage disruptive technology detection by integrating Sentence-BERT embeddings with DTM.
- **Accomplishment**: Presented at *iConference 2025*; 'Excellent Paper' at *East Lake Forum*.

National Mathematical Modeling Competition   8/2023-10/2023
- Developed a dynamic pricing model, boosting revenue by 87.5%.
- Applied STL decomposition and ARIMA for sales prediction.
- **Award:** Provincial Second Prize.

Internship Experience

Information System Intern   6/2023–9/2023
Geological Exploration & Development Research Institute, PetroChina (Chengdu, China)
- Managed geological data using SQL, identifying key exploration patterns.
- Developed software modules, conducted testing, and debugged code.

Data Analyst Intern   12/2022–2/2023
Sichuan Xin Chuan Feng Yue Technology Co., Ltd. (Chengdu, China)
- Identified anomalies in drone performance through data analysis.
- Streamlined workflows and documented key use cases.

Technical skills

Programming & Databases: Python, C#, Java, MySQL, SQL

Honors & Awards

National First Prize (Challenge Cup 2023) | Gold Medal (Zhejiang Challenge Cup 2023) | Silver Award (Zhejiang Internet+ 2022) | Outstanding Student Award (2022)