Shenming Ji

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EDUCATION BACKGROUND

Xi'an Jiaotong-Liverpool University Suzhou, China
B.S. Information and Computing Science *Sep. 2021 - Jul. 2025 (Expected)*

Core Courses: Data Structures (88/100), Artificial Intelligence (72/100), Computer Graphics (82/100), Complexity of Algorithms (78/100), Advanced Object-Oriented Programming (83/100)

PUBLICATION

Gefei Zhang, **Shenming Ji**, Yicao Li, Jingwei Tang, Jihong Ding, Meng Xia, Guodao Sun, Ronghua Liang. *Evidence-based Multimodal Learning Analytics for Evaluation in Collaborative Programming.* (Under Revision)

RESEARCH EXPERIENCE

Investigating the effect of collaboration patterns on bilibili's video performance and creator's individual growth

Xi'an Jiaotong-Liverpool University | Research Assistant Suzhou, China
Supervisor: Prof. Teng Ma *Jun. 2023 - Sep. 2023*

- Utilized **Python** to **web scrape** and analyze a dataset of 37k videos and 43k creators over a six-month period (Dec. 2022 - Jun. 2023).
- Applied **NetworkX** to construct a collaboration network for videos, and prepared cross-sectional data for regression analysis.
- Identified **structural holes** and conducted network analysis, revealing patterns through a U-shaped graph.
- Provided insights into effective collaboration strategies among Bilibili creators that contribute to successful video production.

Evidence-based Multimodal Learning Analytics for Evaluation in Collaborative Programming

Texas A&M University | Visiting Student College Station, USA
Supervisor: Prof. Meng Xia *Apr. 2024 - Sep. 2024*

- Implemented **Faster-Whisper** and **Pyannote_audio** models for speech recognition and speaker diarization, offering detailed analysis of student interactions in collaborative sessions.
- Leveraged the **API** of **LLM (GPT-4o)** model with custom prompts to classify students' behaviors and roles, evaluate the level of teacher scaffolding, and analyze submitted code based on specified criteria for insights into classroom dynamics and performance metrics.
- Utilized **T-SNE** for student distribution visualization and group performance assessment, while **NMF** quantified behavioral and cognitive engagement, leveraging classification results from the **LLM** model.
- Developed an interactive system using **Vue** to aid instructors in understanding student collaboration and programming progress

PROFESSIONAL EXPERIENCE

Yalong Intelligent Equipment Co., LTD Wenzhou, China
Intern of Front-end Group *Jan. 2024 - Feb. 2024*

Program: Yalong Order Management System

- Mastered core front-end technologies, including **HTML**, **CSS**, and **JavaScript**, by completing practical tasks and projects.
- Collaborated on a sub-module of the Order Management System, implementing and testing key features with team members.
- Optimized and debugged front-end code, contributing to improved UI responsiveness and overall system performance.

PROJECT EXPERIENCE

Patient Status Classification Suzhou, China
Team Leader *Feb. 2023 - Apr. 2023*

- Designed a classifier to analyze 15-question survey data, ensuring accurate and reliable predictions of patients' health status.
- Applied **PCA** for dimensionality reduction, effectively preserving critical features to improve the efficiency of model performance.
- Compared **Random Forest**, **SVM**, and **Logistic Regression**, recommending the best one based on performance outcomes.
- Used **K-means** for unsupervised clustering, providing data-driven justifications for accurately grouping and classifying patients.

EXTRACURRICULAR ACTIVITY

Team member of school robot team (Participated RoboMaster University Championship held by DJI) *Sep. 2021 - Jun. 2022*
Leader and Programmer of Interdisciplinary Contest in Modeling (ICM) *Feb. 2023*

SKILLS

- **Programming:** C/C++, Python, Java, JavaScript, HTML/CSS, SQL, LaTeX
- **Languages:** Mandarin (Native), English
- **Tools:** Figma, VS Code, IntelliJ, PyCharm, WebStorm, MATLAB, MySQL, SolidWorks