



RUI SANG

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 EDUCATION

Xi'an Jiaotong-Liverpool University
BSc (Hons) in Information and Computing Science
• Major GPA: 4.00 / 4.00 | Overall GPA: 3.96 / 4.00 | Top 5%
• Honors: University Academic Achievement Award Scholarship
• Research Interest: Machine Learning, Signal Processing

Suzhou, China
Sep 2022 – Jun 2026 (*expected*)
2023, 2024, 2025

 PUBLICATIONS


- Y. Liu, R. Sang, P. Zhang, Z. Li, S. Li, Training a Perceptual Model for Evaluating Auditory Similarity in Music Adversarial Attack, *17th International Symposium on Computer Music Multidisciplinary Research (CMMR)*, 2025. [Accepted]
- Y. Liu*, P. Zhang*, R. Sang, Z. Li, S. Li, MAIA: An Inpainting-Based Approach for Music Adversarial Attacks, *International Society for Music Information Retrieval (ISMIR)*, 2025. [Accepted]
- P. Zhang*, Y. Liu*, Z. Li, R. Sang, Y. Cai, Y. Tan, S. Li, An Entropy-Guided Curriculum Learning Strategy for Data-Efficient Acoustic Scene Classification under Domain Shift, *Workshop on Detection and Classification of Acoustic Scenes and Events (DCASE Workshop)*, 2025. [Accepted]

 RESEARCH EXPERIENCE

Infrared–Visible Multimodal Image Fusion
Research Assistant, Advised by Dr. Xiaohui Zhu
• Co-developed the SWF-DETR framework, architecting its cross-modal attention module to establish synergy between Transformer-based fusion and detection.
• Led experimental validation achieving SOTA performance: improved mAP50 by 1.4% and model stability by 9.7% through rigorous benchmarking and ablation studies.
Jun 2025 – Present


Entropy-Guided Curriculum under Device-Induced Shift
Research Intern, Advised by Dr. Shencheng Li
• Trained an auxiliary domain classifier and applied Shannon entropy-based ranking to schedule data from invariant to device-specific.
• Achieved a +2.6% absolute accuracy improvement on unseen devices under a 5% low-data regime. [Pub. 3]
Jan 2025 – Jun 2025

Reliability & Human-Aligned ML under Distribution Shift
Research Intern, Advised by Dr. Shencheng Li
• Revealed perceptual misalignment in audio models by engineering a dataset of 18,000+ perturbed samples, enabling a novel contrastive learning framework that improved robust accuracy by +9.15%. [Pub. 1]
• Leveraging insights from this work I then developed the critical importance analysis module for the MAIA white-box attack, adapting Grad-CAM to the audio domain to enable targeted, perceptually-stealthy attacks. [Pub. 2]
Sep 2024 – Jun 2025


 PROJECTS

Online Meeting Room Booking System *Team Lead*
• Spearheaded the full-stack architecture for a web application as team lead, defining the database schema, front-end UI, and a modular MVC backend with Spring Boot, JWT Security, and MySQL.
• Engineered a multi-level Redis caching strategy to optimize performance for session management and hot data; containerized the application with Docker for consistent, high-availability deployment on Alibaba Cloud.
Mar 2025 – Apr 2025

GenAI-powered Student Travel Planner App *Team Lead*
• Directed the end-to-end user-centered design process for a GenAI-powered travel planner, translating user research (interviews, personas) into a high-fidelity, interactive prototype in Figma.
• Validated the prototype's usability through three iterative testing cycles, achieving an excellent System Usability Scale (SUS) score of 84.65 and incorporating user feedback to refine key features.
Mar 2025 – Apr 2025

 SKILLS

Programming: Python, Java, C/C++, LaTeX.
Technologies: PyTorch, Spring Boot, MySQL, CUDA, Redis, Git, Docker, Figma.

 ACTIVITIES

Class Committee Member: *Class 4 of 2026, Xi'an Jiaotong-Liverpool University*
Coordinated student-faculty communication, class activities, and student development initiatives.
2023 – 2024

Event Planner – Drama Club: *Xi'an Jiaotong-Liverpool University*
Assisted in organizing campus theater productions, script promotion as part of the Planning Department.
2022 – 2023

Volunteer – Autism Support Program: *“Star Children” Project, Suzhou*
Provided one-on-one support and facilitated inclusive community programs for children with autism.
2023