Rui Sang

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Education

Xi'an Jiaotong-Liverpool University — Suzhou, China
BSc (Hons) in Information and Computing Science — Sep 2022 – Jun 2026 *(expected)*

- **Major GPA:** 4.00 / 4.00 | **Overall GPA:** 3.96 / 4.00
- **Honors:** University Academic Achievement Award (Top 10%) — 2023, 2024, 2025
- **Research Interest:** Machine Learning, Signal Processing

Publications

1. 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.
2. 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.
3. 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.

Research Experience

Infrared–Visible Multimodal Image Fusion — Jun 2025 – Present
Research Assistant, Advised by Dr. Xiaohui Zhu

- Reproduced four deep fusion baselines and implemented end-to-end and unsupervised variants with ablation-ready training pipelines.
- Evaluated models on downstream detection and segmentation tasks, demonstrating consistent improvements over single-modality inputs.

Entropy-Guided Curriculum under Device-Induced Shift — Jan 2025 – Jun 2025
Research Intern, Advised by Dr. Shencheng Li (IEEE Senior member)

- 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]

Reliability & Human-Aligned ML under Distribution Shift — Sep 2024 – Jun 2025
Research Intern, Advised by Dr. Shencheng Li

- **Human-aligned representation:** Conducted large-scale MOS/2AFC evaluations (>18k pairs), revealing proxy misalignment (best $\rho = 0.44$); proposed sequential contrastive learning with perceptual priors atop a frozen foundation model ($\rho = 0.65$), achieving **+9.15%** robust accuracy under diverse attacks. [Pub. 1]
- **Adversarial evaluation:** Designed a gradient-free, coarse-to-fine importance analysis pipeline; integrated generative inpainting to perturb salient regions, achieving ASR **92.8%** with $MOS \approx 4.0$ and lower distortion than PGD/C&W. [Pub. 2]

Projects

Online Meeting Room Booking System — *Team Lead, Mar 2025 – Apr 2025*

- Led a team of 4 in developing a full-stack web application using Spring Boot, JWT-based Security, MySQL, and Redis under Agile methodology; delivered the complete admin module including RBAC, booking workflows, and analytical dashboards.
- Implemented role-based access control, credential hashing, and structured logging; designed and executed a load-testing plan with JMeter; developed integration tests for core API endpoints.

Personalized Student Travel Planner App (HCI) — *Team Lead, Mar 2025 – Apr 2025*

- Directed UI/UX design using Figma; conducted 3 iterative usability testing cycles; developed a functional prototype showcasing GenAI-assisted itinerary planning, accompanied by detailed flowcharts, component breakdowns, and annotated test feedback.

Skills

Programming: Python, Java, C/C++, LaTeX.

Technologies: PyTorch, Spring Boot, MySQL, Redis, Git, Docker, Figma.

Activities

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

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

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