Kaiqi Jiang

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EDUCATION

University of Illinois Urbana-Champaign (UIUC)   August 2018
Bachelor of Computer Science, GPA: 3.5   *Champaign, IL*
- **Advisor:** Kevin Chenchuan Chang, **Research Area:** Data Mining, Machine Learning

Brown University   May 2020
Master of Computer Science, GPA: 3.5   *Providence, RI*

University of Illinois Chicago (UIC)   Expected: May 2026
Ph.D., GPA: 4.0   *Chicago, IL*
- **Advisor:** Xinhua Zhang, **Research Area:** Domain Adaptation, Fairness, Generative Models

INDUSTRIAL EXPERIENCE

AI Intern (Speech)   May 2023 – August 2023
*Sony PlayStation **Manager:** Lakshmish Kaushik, **Mentor:** Kusha Sridhar*   *San Mateo, CA*
- Submitted two patents related to audio postprocessing and domain adaptation in a studio-quality large-scale TTS.
- Designed a versatile and portable emphasis module, seamlessly integrating it into the industrial-level TTS system.
- Engineered modifications to the existing TTS model, enabling limited data adaptation through adjustments to the VAE module and the incorporation of high-level acoustic encoders.

Data Engineer Intern   June 2019 – August 2019
Boke Technology   *Shanghai, China*
- Conducted feature extraction on a dataset of iOS in-app purchases and gameplay data, utilizing PCA and t-SNE.
- Employed VAE-based soft-imputation to forecast patterns in in-app purchases.

SELECTED PUBLICATIONS

Kaiqi Jiang, Wenzhe Fan, Mao Li, and Xinhua Zhang. **Fairness Risks for Group-conditionally Missing Demographics** *Artificial Intelligence and Statistics (AISTATS)*, 2025.

Mao Li, **Kaiqi Jiang**, and Xinhua Zhang. **Implicit Task-Driven Probability Discrepancy Measure for Unsupervised Domain Adaptation.** In *Advances in Neural Information Processing Systems (NeurIPS)*, pp. 25824–25838, 2021.

RESEARCH EXPERIENCE

Multi-Objective Text-to-Audio Alignment   October 2024 – Present
University of Illinois Chicago (UIC)   *Chicago, IL*
- Pioneers the integration of multi-objective direct preference optimization (DPO) in CLAP-based diffusion-driven Text-to-Audio tasks.
- Curates and structures a dynamically updated preference dataset incorporating loudness, pitch level, sound quality, and prompt alignment as multi-objective criteria.

Fairness-aware Semi-supervised Learning with Missing Groups   March 2023 – October 2023
University of Illinois Chicago (UIC)   *Chicago, IL*
- Encompassed situations where both labels and groups are partially missing beyond conventional fairness learning.
- Coordinated the architecture using a Semi-supervised Variational Autoencoder (SS-VAE) backbone.

Alignment-based Unsupervised Domain Adaptation (NeurIPS)   August 2020 – September 2021
University of Illinois Chicago (UIC)   *Chicago, IL*
- Designed a bi-level optimization algorithm to resolve the conflict of the objective function presented by MDD.
- Conducted experiments via Kubernetes GPU clusters and compared with SOTA UDA approaches in 2021.

SERVICES

Expertise: Generative Models, Variational Autoencoder, Text-to-Speech (TTS), Text-to-Audio (TTA), Reinforcement learning from human feedback (RLHF), Direct Preference Optimization (DPO), Diffusion Models, Fairness-aware Machine Learing
Conferences: AISTATS 2025, Amazon NSF Fairness in AI PI Meeting 2024, NeurIPS 2021
Reviews: AISTATS 2024, 2025
Programming: Python, Pytorch, Tensorflow, OpenCV, scikit-learn, Pandas, Shell, Matlab, Java