Xu Zheng

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SUMMARY STATEMENT

Applied Scientist candidate specializing in **LLM Agents, Time-Series Learning, and Graph-based Modeling**. Experienced in designing novel methods, conducting empirical research, etc. Skilled in **Explainable AI** and **Machine Learning**, committed to developing reliable machine learning systems that advance real-world applications.

EDUCATION

Florida International University **Miami, FL**
Ph.D. in Computer Science *01/2023 - 08/2027(Expected)*

University of Electronic Science and Technology of China **Chengdu, China**
M.E. in Control Science and Engineering *09/2018 - 06/2021*

Chongqing University **Chongqing, China**
B.E. in Electronic Science and Technology *09/2014 - 06/2018*

EXPERIENCE

DSSS, NEC Laboratories America, Inc **Princeton, NJ**
Research Scientist Intern *05/2024 - 08/2024*

- Developed an anomaly detection system combining time-series and textual data, cutting false alarms by 50% through improved cross-modal interactions.
- Designed a multi-modal fusion strategy integrating three complementary detection methods, reducing false alarms by 90% on a real-world dataset via majority voting.

Department of Image Algorithm, ZTE **Chengdu, China**
Machine Learning Engineer *07/2021 - 01/2023*

- Built an automated data collection pipeline, capturing 2,000+ images for training, and designed deep neural networks for image restoration in Under-Display Camera (UDC) systems.
- Applied pruning and quantization to optimize Raw Image Denoising Networks, improving inference speed by 25%.
- Deployed and validated optimized neural networks on Android devices using TensorFlow Lite and Snapdragon QNN frameworks.

SELECTED PAPERS

- **Xu Zheng**, Wei Cheng, Zhuomin Chen, Dongkuan Xu, Mo Sha, Jingchao Ni, Dongsheng Luo, "First-Order LoRA Training with Phone NPUs", arXiv Preprint arXiv:2610.24816, 2026.
- **Xu Zheng**, Chaohao Lin, Zhuomin Chen, Weijieying Ren, Haifeng Chen, Wei Cheng, Dongsheng Luo, "Bridging Inference-Time Scaling and Episodic Memory with Action-Centric Graphs", arXiv Preprint arXiv:2607.27415, 2026.
- **Xu Zheng**, Zhuomin Chen, Chaohao Lin, Hua Wei, Haifeng Chen, Wei Cheng, Dongsheng Luo, "Leveraging Trajectory Graphs for Pre-Execution Error Diagnosis in Agentic LLM Systems", arXiv Preprint arXiv:2607.27443, 2026.
- **Xu Zheng**, Zhuomin Chen, Esteban Schafir, Sipeng Chen, Hojat Allah Salehi, Haifeng Chen, Farhad Shirani, Wei Cheng, Dongsheng Luo, "LM^{2}OTIFS: An Explainable Framework for Machine-Generated Texts Detection", arXiv Preprint arXiv:2505.12507, 2025.
- **Xu Zheng**, Chaohao Lin, Sipeng Chen, Zhuomin Chen, Jimeng Shi, Jayantha Obeysekera, Jingchao Ni, Wei Cheng, Jason Liu, Dongsheng Luo, "Uncovering Insights of Compound Flooding with Data-Driven AI", ACM SIGKDD Conference on Knowledge Discovery and Data Mining **(KDD) [Acceptance Rate: 30.8%]**, 2026.
- **Xu Zheng**, Farhad Shirani, Zhuomin Chen, Chaohao Lin, Wei Cheng, Wenbo Guo, Dongsheng Luo, "F-Fidelity: A Robust Framework for Faithfulness Evaluation of Explainable AI", International Conference on Learning Representations **(ICLR) [Acceptance Rate: 31.73%]**, 2025.
- **Xu Zheng**, Tianchun Wang, Wei Cheng, Aitian Ma, Haifeng Chen, Mo Sha, Dongsheng Luo, "Parametric Augmentation for Time Series Contrastive Learning", International Conference on Learning Representations **(ICLR) [Acceptance Rate: 30.94%]**, 2024.
- **Xu Zheng***, Farhad Shirani*, Tianchun Wang, Wei Cheng, Zhuomin Chen, Haifeng Chen, Hua Wei, Dongsheng Luo, "Towards Robust Fidelity for Evaluating Explainability of Graph Neural Networks", International Conference on Learning Representations **(ICLR) [Acceptance Rate: 30.94%]**, 2024.
- **Xu Zheng**, Tianchun Wang, Samin Yasar Chowdhury, Ruimin Sun, Dongsheng Luo, "Unsafe Behavior Detection with Adaptive Contrastive Learning in Industrial Control Systems", IEEE European Symposium on Security and Privacy Workshops **(EuroS&PW)**, 2023.
- **Xu Zheng**, Yali Zheng, Shubing Yang, "Generating Multiple Hypotheses for 3D Human Mesh and Pose using Conditional Generative Adversarial Nets", Asian Conference on Computer Vision **(ACCV) [Acceptance Rate: 33.1%]**, 2022.