

Xu Zheng

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🌐 <https://aslanding.github.io/>

🏠 Miami, FL

SUMMARY STATEMENT

Research Scientist Intern candidate with experience in **LLM Agents, Time-Series Learning, and Graph-based Modeling**. Skilled in **Explainable AI** and **Machine Learning**, committed to developing scalable, efficient, and reliable machine learning systems that advance real-world applications.

EDUCATION

Florida International University

Ph.D. in Computer Science

Miami, FL

01/2023 - Present

University of Electronic Science and Technology of China

M.S. in Control Science and Engineering

Chengdu, China

09/2018 - 06/2021

Chongqing University

B.S. in Electronic Science and Technology

Chongqing, China

09/2014 - 06/2018

EXPERIENCE

DSSS, NEC Laboratories America, Inc

Research Scientist Intern

Princeton, NJ

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

Machine Learning Engineer

Chengdu, China

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% while reducing model size.
- Deployed and validated optimized neural networks on Android devices using TensorFlow Lite and Qualcomm Snapdragon QNN frameworks.

PROJECTS

Graph for LLMs & Agents

01/2025 - Present

- Proposed LM²otifs, an explainable framework for detecting machine-generated texts by modeling linguistic patterns as graph motifs, achieving a 4% accuracy improvement and providing multi-level explanations to enhance interpretability and robustness in LLM text forensics.
- Introduced Environment Copilot, a graph-based diagnostic framework for LLM agents, which models action trajectories as probabilistic graphs to identify error-prone patterns, achieving a 14.7% average improvement in success rate on long-horizon tasks.
- Integrating graph-based memory for LLM agent inference, achieving 15.4%/5.47% average improvement for success/progress rate compared to stateless baselines.

SELECTED PAPERS

- Xu Zheng, et al., Dongsheng Luo, "GMAIS: Graph-based Memory for Agent Inference Scaling", Under Review, 2026.
- Xu Zheng, et al., Dongsheng Luo, "Environment Copilot: A Graph-based Framework for Action Error Diagnosis and Decision", Under Review, 2026.
- Xu Zheng, et al., Dongsheng Luo, "LM²OTIFS: An Explainable Framework for Machine-Generated Texts Detection", arXiv Preprint, 2025.
- Xu Zheng, et al., Dongsheng Luo, "F-Fidelity: A Robust Framework for Faithfulness Evaluation of Explainable AI", **ICLR[Acceptance Rate: 31.73%]**, 2025.
- Zichuan Liu, Tianchun Wang, Jimeng Shi, Xu Zheng, et al., Dongsheng Luo, "TimeX++: Learning Time-Series Explanations with Information Bottleneck", **ICML[Acceptance Rate: 30.50%]**, 2024.
- Xu Zheng, et al., Dongsheng Luo, "Parametric Augmentation for Time Series Contrastive Learning", **ICLR[Acceptance Rate: 30.94%]**, 2024.
- Xu Zheng*, Farhad Shirani*, et al., Dongsheng Luo, "Towards Robust Fidelity for Evaluating Explainability of Graph Neural Networks", **ICLR[Acceptance Rate: 30.94%]**, 2024.
- Xu Zheng, et al., Dongsheng Luo, "PAC Learnability under Explanation-Preserving Graph Perturbations", arXiv Preprint, 2024.
- Xu Zheng, Yali Zheng, Shubing Yang, "Generating Multiple Hypotheses for 3D Human Mesh and Pose using Conditional Generative Adversarial Nets", **ACCV**, 2022.