XU ZHENG

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EDUCATION

Florida International University(FIU) Jan. 2023 - Dec. 2027(Expected)
· Ph.D. in Computer Science Advisor: Prof. Dongsheng Luo Miami, USA

University of Electronic Science and Technology of China (UESTC) Sep. 2018 - Jun. 2021
· M.E. in Control Science and Engineering Chengdu, China

Chongqing University (CQU) Sep. 2014 - Jun. 2018
· B.E. in Electronic Science and Technology Chongqing, China

WORKING EXPERIENCE

DSSS, NEC Laboratories America, Inc May 2024 - Aug. 2024
Research Intern, Mentor: Dr. Junxiang Wang Princeton, NJ

- Multi-Modal Time Series Anomaly Detection.

Department of Image Algorithm, ZTE July 2021 - Jan. 2023
AI and Algorithm Design Chengdu, China

- Created automation data collection pipeline, designed deep neural network for restoring images for **Under-Display Camera(UDC)**
- Implemented pruning, and quantization methods for **Raw Image Denoising Networks**.
- Tested and deployed deep neural networks on Android platform with **Tflite**,**Snapdragon QNN**.

SELECTED PROJECTS

Analysis of Compound flood in South Florida Nov. 2024 - Now
Advisor: Prof. Dongsheng Luo, FIU

- SF^2Bench: A dataset and benchmark for Compound Flood Forecasting in South Florida.

Explainable Framework Development Nov. 2024 - Now
Advisor: Prof. Dongsheng Luo, FIU

- An explainable framework for LLM authorship detection.

Explanation-Assistant Learning Jan. 2023 - Now
Advisor: Prof. Dongsheng Luo, FIU

- Explainability-Assisted Graph Neural Networks for Data Efficiency.
- Information-theoretic contrastive learning framework for time series data augmentations.

Robust Evaluation Framework for XAI Sept. 2023 - Feb. 2025
Advisor: Prof. Dongsheng Luo, FIU

- A Robust Evaluation Method, R-Fidelity, for Explainable GNNs.
- A Robust Evaluation Framework, F-Fidelity, for Explainable AI in Image, Time Series, NLP.

Generative Adversarial Learning for 3D Human Shape Generation May 2019 - May 2021
Advisor: Prof. Yali Zheng, UESTC

- Explored human mesh generating by using **Conditional GAN** and optimization-based method from a single picture based on **SMPL**.
- Explored human mesh recovery under multi-view constraints.
- Estimated human mesh postures using 2D postures and weak depth labels.

SELECTED PAPERS

1. **Xu Zheng**, Chaohao Lin, et, al, Dongsheng Luo,"SF^2Bench: Evaluating Data-Driven Models for Compound Flood Forecasting in South Florida", arXiv Preprint, 2025.
2. **Xu Zheng**, et al, Wei Cheng, Dongsheng Luo,"LM^2OTIFS: An Explainable Framework for Machine-Generated Texts Detection", arXiv Preprint, 2025.

3. Sipeng Chen, **Xu Zheng**, Zeda Yin, Qiang Chen, Yuepeng Li, Jason Liu, Dongsheng Luo,"daptive Dice Loss for Extremely Imbalanced Segementation in Wetland Delineation", **Workshop at ICLR**, 2025.
4. **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", **ICLR**, 2025.
5. Zhuomin Chen, Jingchao Ni, Hojat Allah Salehi, **Xu Zheng**, Esteban Schafir, Farhad Shirani, Dongsheng Luo,"Explanation-Preserving Augmentation for Semi-Supervised Graph Representation Learning", arXiv Preprint, 2024.
6. **Xu Zheng**, et. al, Dongsheng Luo,"PAC Learnability under Explanation-Preserving Graph Perturbations", arXiv Preprint, 2024.
7. Zichuan Liu, Tianchun Wang, Jimeng Shi, **Xu Zheng**, et. al, Dongsheng Luo, "TimeX++: Learning Time-Series Explanations with Information Bottleneck", **ICML**, 2024
8. **Xu Zheng**, Tianchun Wang, Wei Cheng, Aitian Ma, Haifeng Chen, Mo Sha, Dongsheng Luo, "Parametric Augmentation for Time Series Contrastive Learning", **ICLR**, 2024, **IJCAI workshop AI4TS**, 2023. (**Best Paper Award**)
9. **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", **ICLR**, 2024.
10. **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.
11. Minghao Lin, Minghao Cheng, Yueqi Chen, **Xu Zheng**, Dongsheng Luo, Huajiang Chen, "CLExtract: An End-to-End Tool Decoding Highly Corrupted Satellite Stream from Eavesdropping", **Black Hat USA Arsenal**, 2023.
12. **Xu Zheng**, Yali Zheng, Shubing Yang, "Generating Multiple Hypotheses for 3D Human Mesh and Pose using Conditional Generative Adversarial Nets", **ACCV**, 2022.

PROFESSIONAL SERVICES

· Reviewer: NeurIPS 24,25; CIKM 24; ICLR 25; ICML 25; AISTATS 25; TKDE, Neurocomputing
· External Reviewer: ICDM 22,23,24; WSDM 23,24; SDM 24; KDD 23; ICLR 24; IJCAI 23, 24; ICML 23, 24; NeurIPS 23; AAAI 25; IEEE CLOUD 2023; ACM TKDD; PAKDD 24

TEACHING EXPERIENCES

Intermediate Java Programming Jan. 2024 - Apr. 2024

· Role: Teaching Assistant
· Instructor: Prof. Mustafa Ocal, FIU
· 69 Students

Introduction to Artificial Intelligence Aug. 2023 - Dec. 2023

· Role: Teaching Assistant
· Instructor: Prof. Yanzhao Wu, FIU
· 39 Students

System Programing May 2023 - Aug. 2023

· Role: Teaching Assistant
· Instructor: Prof. Latesh Kumar KJ, FIU
· Over 40 Students

SOFTWARE AND CODE RELEASE

Towards Robust Fidelity for Evaluating Explainability of Graph Neural Networks

· https://github.com/AslanDing/Robust-Fidelity

AutoTCL: Automated Time Series Contrastive Learning with Adaptive Augmentations

· https://github.com/AslanDing/AutoTCL

F-Fidelity: A Robust Framework for Faithfulness Evaluation of Explainable AI

· https://github.com/AslanDing/Finetune-Fidelity

SF^{2}Bench: Evaluating Data-Driven Models for Compound Flood Forecasting in South Florida

· https://github.com/AslanDing/SFBench

A Robust Decoding System for Highly Corrupted Satellite Stream Recovery

· https://github.com/AslanDing/CLExtract

TECHNICAL SKILLS

· **Programming Languages:** Python, Java, C/C++
· **Software and Tools:** PyTorch, PyG, Tensorflow, OpenCV