XU ZHENG

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EDUCATION

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

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

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

RESEARCH AREAS

Explainable AI, Graph Neural Networks(GNNs), Time Series Learning, Contrastive Learning

WORKING EXPERIENCE

DSSS, NEC Lab 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

Explainable Authorship Detection Nov. 2024 - Now
Advisor: Prof. Dongsheng Luo, Dr. Wei Cheng

- An explainable framework for LLM authorship detection.

Explainable Graph Neural Networks Nov. 2023 - Now
Advisor: Prof. Dongsheng Luo, FIU

- Explainability-Assisted Graph Neural Networks for Data Efficiency.
- Robust Evaluation Metrics for Explainable GNNs.

Time Series Contrastive Learning with Adaptive Augmentations Jan. 2023 - Sept. 2023
Advisor: Prof. Dongsheng Luo, FIU

- Information-theoretic framework for time series data augmentations.
- Contrastive learning augmentation framework for time series representation.

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**, et al, Wei Cheng, Dongsheng Luo,"LM^{2}OTIFS: An Explainable Framework for Text Authorship Detection", Manuscript
2. **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

3. Zhuomin Chen, Jingchao Ni, Hojat Allah Salehi, **Xu Zheng**, Esteban Schafir, Farhad Shirani, Dongsheng Luo,"Explanation-Preserving Augmentation for Semi-Supervised Graph Representation Learning". Preprint, arXiv:2410.12657
4. **Xu Zheng**, et. al, Dongsheng Luo,"PAC Learnability under Explanation-Preserving Graph Perturbations". Preprint, arXiv:2402.05039
5. Zichuan Liu, Tianchun Wang, Jimeng Shi, **Xu Zheng**, et. al, Dongsheng Luo, "TimeX++: Learning Time-Series Explanations with Information Bottleneck". ICML, 2024
6. **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**)
7. **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.
8. **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.
9. 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.
10. **Xu Zheng**, Yali Zheng, Shubing Yang, "Generating Multiple Hypotheses for 3D Human Mesh and Pose using Conditional Generative Adversarial Nets", Proceedings of the Asian Conference on Computer Vision, ACCV 2022.

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

PROFESSIONAL SERVICES

Reviewer

· NeurIPS 24
· CIKM 24
· ICLR 25
· AISTATS 25

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

SOFTWARE AND DATA RELEASE

A Robust Decoding System for Highly Corrupted Satellite Stream Recovery

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

AutoTCL: Automated Time Series Contrastive Learning with Adaptive Augmentations

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

Towards Robust Fidelity for Evaluating Explainability of Graph Neural Networks

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