Xiao Guo **Last update: July 10 th, 2025**

BACKGROUND I am a fifth-year Ph.D. student in the CVLab of Michigan State University, advised by Prof. Xiaoming Liu (Fellow of IEEE and IAPR). Before that, I was a Research Programmer at USC Information Sciences Institute, working with Prof. Iacopo Masi and Prof. Wael AbdAlmageed.

RESEARCH INTERESTS

1. Generative AI: Large Multi-Modal Language Model (CVPR25; ECCV24; NeurIPS24) and Image Generative Model (ArXiv2024).
2. Responsible AI: Image Forgery Detection (CVPR23; IJCV24) and face anti-spoofing (ECCV22).

CONTACT

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`Github:`https://github.com/CHELSEA234 `Google Scholar Profile:`link

SELECTED PUBLICATIONS

1. **Xiao Guo**, Xiufeng Song, Yue Zhang, Xiaohong Liu, Xiaoming Liu, "Rethinking Vision-Language Model in Face Forensics: Multi-modal Interpretable Forged Face Detector", *CVPR* 2025. (**Oral, 0.7% Acceptance Rate**). [PDF, code, project page]
2. **Xiao Guo**, Vishal Asnani, Sijia Liu, Xiaoming Liu, "Tracing Hyperparameter Dependencies for Model Parsing via Learnable Graph Pooling Network", *NeurIPS*, 2024. [PDF, code]
3. Xiufeng Song, **Xiao Guo**, *et al*, "On Learning Multi-Modal Forgery Representation for Diffusion Generated Video Detection", *NeurIPS*, 2024. [PDF, code]
4. **Xiao Guo**, Xiaohong Liu, Iacopo Masi, Xiaoming Liu, "Language-guided Hierarchical Fine-grained Image Forgery Detection and Localization", *IJCV*, 2024. [PDF, code]
5. Yue Zhang, Ben Colman, **Xiao Guo**, Ali Shahriyari, Gaurav Bharaj, "Common Sense Reasoning for Deepfake Detection", *ECCV*, 2024. [PDF, code]
6. **Xiao Guo**, Manh Tran, Jiaxin Cheng, Xiaoming Liu, "Dense-Face: Personalized Face Generation Model via Dense Annotation Prediction", *ArXiv*, 2024. [PDF, Code, Project Page]
7. **Xiao Guo**, Xiaohong Liu, Zhiyuan Ren, Steven Grosz, Iacopo Masi, *et al*, "Hierarchical Fine-Grained Image Forgery Detection and Localization", *CVPR*, 2023. [PDF, code]
8. **Xiao Guo**, Yaojie Liu, Anil Jain, Xiaoming Liu, "Multi-domain Learning for Updating Face Anti-spoofing Models", *ECCV*, 2022. (**Oral, 2.7% Acceptance Rate**). [PDF, code]

OTHER PUBLICATIONS

1. Zhimin Chen, Xuewei Chen, **Xiao Guo**, Longlong Jing, Liang Yang, Bing Li, "Point Cloud Self-supervised Learning via 3D to Multi-view Masked Leaner", *ICCV*, 2025. [PDF, code]
2. I-Hung Hsu, **Xiao Guo**, Prem Natarajan and Nanyun Peng, "Discourse-level Relation Extraction via Graph Pooling", *AAAI Workshop on Deep Learning on Graphs*, 2022 (**Best Paper, 2% Acceptance Rate**). [PDF, Workshop Page]
3. **Xiao Guo**, Jongmoo Choi. "Human motion prediction via learning local structure representations and temporal dependencies", *AAAI* 2019 [PDF, code]

INDUSTRY EXPERIENCE

Amazon One, Seattle, WA, U.S.A May 2024 – Aug. 2024

- Applied Scientist Intern with Dr. Carlos D. Castillo and Dr. Hongcheng Wang
- Working on anomaly detection and segmentation via multi-modal representation learning.

Amazon Alexa, Los Angeles, CA, U.S.A May 2023 – Aug. 2023

- Applied Scientist Intern with Dr. Yue Rex Wu
- Working on the identity-consistent face image generation, using stable diffusion and controlNet.

Information Sciences Institute, USC, Los Angeles, CA, U.S.A Dec. 2018 – Nov. 2020

- Research Programmer with Prof. Iacopo Masi and Prof. Wael AbdAlmageed
- Working on various research topics, such as Deepfakes detection, face-based disease diagnosis, sentence similarity prediction, and text entity relation extraction.

Selected Research Project

Generalizable Deepfake Detection via Large Language Model Dec. 2023 – Present

- Proposed a deepfake detection framework, which takes the image as the input and outputs the binary classification results and textual descriptions for better interpretation. These textual descriptions are generated by the incorporated LLM.

Reverse Engineer: Parsing Generative Methods Hyper-parameters Dec. 2022 – Dec. 2023

- Design a novel way to formulate the *model parsing* as a graph node classification task, using a directed graph to capture dependencies among different hyperparameters.

Image Forgery Detection and Localization Feb. 2022 – Oct. 2023

- Develop a unified algorithm for image forgery detection and localization (IFDL), regardless of whether the image is generated in image editing or digital domains.

Face Presentation Attack Detection May 2021 – Mar. 2022

- Proposed a face anti-spoofing (FAS) algorithm, which achieves the best face-modality performance in the IAPRA ODIN (link) project, outperforming 10 different college research teams.
- Propose a multi-domain learning algorithm to help the FAS algorithm maintain remarkable detection performance in both source and target domain datasets. This work is published in ECCV2022.

Education

Michigan State University, East Lansing, MI, U.S.A 2021–2025 (expected)

- Ph.D. in Computer Science, GPA:3.6/4.0.
- Advisor: Prof. Xiaoming Liu.

University of Southern California, Los Angeles, CA, U.S.A 2016–2018

- M.Sc., Computer Science. GPA:3.2/4.0.

Wuhan University of Technology, Wuhan, Hubei, China. 2011–2015

- B.Sc., Electronics and Telecommunications. GPA:3.8/4.0.

Honors and Awards

- ***Student Travel Award*** in AAAI. 2019.
- ***Excellent Graduation Thesis Award*** in Hubei Province. (Scale: 1%) 2015.
- ***Outstanding Graduates*** in Wuhan University of Technology. (Scale: 10%) 2015.

Technical Skills

- *Programming Languages*: Python, Java, C/C++.
- *Tools*: PyTorch, Tensorflow, Linux, Vim, Git, Latex.