Feiran Li

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Education

- **Institute of Information Engineering, Chinese Academy of Sciences** — Beijing, China
  Ph.D. Student, ***Expected Graduation: 2028*** — *Sep 2023 - Present*
- **China University of Mining and Technology** — Xuzhou, China
  B.E. in Computer Science and Technology — *Jun 2019 - Jun 2023*

Skills Summary

- **Research Areas**: AIGC, LLM, Agent, Computer Vision
- **Programming**: Python, C++, Bash
- **Soft Skills**: Research & Communication, Coding, Presentation, Writing

Projects

- **Size-invariance Matters: Rethinking Metrics and Losses for Imbalanced Multi-object Salient Object Detection (ICML 2024 Spotlight)**: Designed a **size-invariant evaluation and optimization framework** for imbalanced multi-object salient object detection, addressing the bias of conventional metrics and losses toward large objects. The work provides a general perspective for fairer dense prediction under severe object-size imbalance and was selected as an **ICML 2024 Spotlight paper (3.5%)**.
- **One Image is Worth a Thousand Words: A Usability Preservable Text-Image Collaborative Erasing Framework for Diffusion Models (ICML 2025)**: Developed a **text-image collaborative concept erasing framework** for diffusion models, using visual evidence to improve concept grounding while preserving generation usability. The extended version is under research, exploring **on-policy sampling** and **state-aware dynamic distillation** to train safer generative models that adapt their safety behavior according to their own generation states.
- **BlackMirror: Black-Box Backdoor Detection for Text-to-Image Models via Instruction-Response Deviation (CVPR 2026)**: Built a **black-box security evaluation framework** for text-to-image models that detects backdoor behaviors through instruction-response deviation. The method integrates **VLM/LLM-based semantic parsing, consistency checking, and stability analysis**, enabling risk assessment without access to training data, model weights, or trigger patterns.
- **ICCV'25 DataCV Challenge (First Prize)**: Developed a **data-centric vision solution** for efficient and privacy-preserving face recognition dataset generation. The project won **First Prize in the ICCV 2025 DataCV Challenge** and led to a workshop paper, highlighting practical strengths in synthetic data construction, privacy-aware generation, and competition-driven system design.

Publications

- **Size-invariance Matters: Rethinking Metrics and Losses for Imbalanced Multi-object Salient Object Detection**: **Feiran Li**, Qianqian Xu, Shilong Bao, Zhiyong Yang, Runmin Cong, Xiaochun Cao, Qingming Huang. **International Conference on Machine Learning (ICML), 2024. Spotlight (3.5%).**
- **One Image is Worth a Thousand Words: A Usability Preservable Text-Image Collaborative Erasing Framework for Diffusion Models**: **Feiran Li**, Qianqian Xu, Shilong Bao, Zhiyong Yang, Xiaochun Cao, Qingming Huang. **International Conference on Machine Learning (ICML), 2025.**
- **BlackMirror: Black-Box Backdoor Detection for Text-to-Image Models via Instruction-Response Deviation**: **Feiran Li**, Qianqian Xu, Shilong Bao, Zhiyong Yang, Xilin Zhao, Xiaochun Cao, Qingming Huang. **Conference on Computer Vision and Pattern Recognition (CVPR), 2026.**
- **Towards Size-invariant Salient Object Detection: A Generic Evaluation and Optimization Approach**: Shilong Bao, Qianqian Xu, **Feiran Li**, Zhiyong Yang, Boyu Han, Xiaochun Cao, Qingming Huang. IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI), 2025.
- **Hybrid Generative Fusion for Efficient and Privacy-Preserving Face Recognition Dataset Generation**: **Feiran Li**, Qianqian Xu, Shilong Bao, Boyu Han, Zhiyong Yang, Qingming Huang. **ICCV 2025 Workshop (Oral).**
- **MOL: Joint Estimation of Micro-Expression, Optical Flow, and Landmark via Transformer-Graph-Style Convolution**: Zhiwen Shao, Yifan Cheng, **Feiran Li**, Yong Zhou, Xuequan Lu, Yuan Xie, Lizhuang Ma. IEEE Transactions on Pattern Analysis and Machine Intelligence (Accepted).

Honors and Awards

- First Prize at ICCV'25 Competition (DataCV Challenge) - July, 2025
- National Scholarship for Undergraduates (2020–2021) - December, 2021
- National Scholarship for Undergraduates (2019–2020) - December, 2020