KEWEI ZHANG

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I am a third-year CS undergraduate student in the AIM Lab at Wuhan University, under the supervision of Prof. Zheng Wang. My research interests lie in Computer Vision, Trustworthy AI, and Large Vision-Language Models (LVLM). Additionally, I am passionate about AI-driven computer applications and have accumulated technical expertise in AI-related software development.

EDUCATION

Wuhan University Bachelor of Software Engineering Expected Graduation Date: June 2026

Senior | GPA: 3.91 / 4.0

SELECTED PUBLICATIONS

[1] Hui Wei*, Zhixiang Wang*, Kewei Zhang* (Co-first Author), Jiaqi Hou, Yuanwei Liu, Hao Tang, and Zheng Wang. Revisiting Adversarial Patches for Designing Camera-Agnostic Attacks against Person Detection[C]. NeurIPS 2024.

[2] Hui Wei, Hanxun Yu, Kewei Zhang, Zhixiang Wang, Jianke Zhu, and Zheng Wang. Moiré Backdoor Attack (MBA): A Novel Trigger for Pedestrian Detectors in the Physical World[C]. ACM MM 2023.

SUBMITTED WORKS

- [1] Pose Does Matter: Keypoint-Guided Adversarial Patches for Effective Person Hiding Attacks. Submitted to CVPR 2025. Investigating new approach to attack person detector, other than patch-based methods and texture-based methods, in order to achieve a total evasion facing real-world cameras.
- [2] Adversarial Watermarking under Diverse Manipulations: Benchmarking and Beyond. Submitted to TIP. Focused on exploring defense method against watermark remove networks.

RESEARCH EXPERIENCE

AIM Lab (AI&Multimedia Lab)

Wuhan, China

Intern under the supervision of Professor Zheng Wang

March 2023 - Present

- Currently working with Hui Wei on the field "Adversarial Attack" in the AIM Lab (Lab's Homepage) at Wuhan University.
- Also Conducting research on Controllable Diffusion models and Model Diagnosis with Zhixiang Wang.

SELECTED AWARDS

Lei Jun Computer Scholarship (20 of 1600) | Wuhan University **National Scholarship** (2 of 522) | *Ministry of Education* Honorable Mention | COMAP's 2024 MCM/ICM. National First Award | The 18th China "Challenge Cup" Competition.

November 2024 October 2023 April 2024 September 2023

SELECTED PERSONAL PROJECTS

January 2024

- Enhanced MultiDiffusion (Academic project)
 * Inject ControlNet into MultiDiffusion's pipeline, implemented with Pytorch.
 - * Enable user to generate images with both region and sketch control, and to write prompts for every mask, achieving extremely precise control for SD models.
- Project Manager: Just Dev (Web Application)
 * A novel project manager that establishes a binding between project requirements, tasks, GitHub PR. It introduces a "task dependency graph" mechanism, integrated with **LLM Agent**.
 - * Backend implemented in **Rust** with Axum framework and y-CRDT. Frontend implemented in Typescript with Next.is.
- Bias Discovery: Model Diagnosis with LLM (Academic project)
 * Automatically discover bias in Glass Segmentation Model by a framework of hypothesis prompt and verify cycle.
 - * Implemented with Langchain and GPT-4o.