

Shaoyuan Xie

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EDUCATION

University of California, Irvine

Ph.D. in Computer Science

Irvine, CA

Expected Jun 2028

Huazhong University of Science and Technology (HUST)

B.Eng. in Automation, GPA 3.97 / 4.00 (Top 1)

Wuhan, CN

Jun 2023

Honors: Honors Bachelor Degree, National Scholarship (0.2%, 2 years)

PUBLICATION

My research interests focus on the intersection of AI, Security, and Autonomous System

- **Are VLMs Ready for Autonomous Driving? An Empirical Study from Reliability, Data, and Metric Perspectives**

Shaoyuan Xie, Lingdong Kong, Yuhao Dong, Chonghao Sima, Wenwei Zhang, Qi Alfred Chen, Ziwei Liu, Liang Pan

(Under Review) Submitted to *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2025

- **FlyTrap: Physical Adversarial Attack Towards Camera-based Autonomous Target Tracking System**

Shaoyuan Xie, Mohamad Fakhri, Fayzah Alshammari, Ningfei Wang, Takami Sato, Halima Bouzidi, Mohammad Al Faruque, Qi Alfred Chen

(Under Review) Pre-print

- **Exploring Backdoor Attacks against Large Language Model-based Decision Making**

Shaoyuan Xie*, Ruochen Jiao*, Justin Yue, Takami Sato, Lixu Wang, Yixuan Wang, Qi Alfred Chen, Qi Zhu

(Under Review) Submitted to *International Conference on Learning Representations (ICLR)*, 2025

- **Benchmarking and Improving Bird's Eye View Perception Robustness in Autonomous Driving**

Shaoyuan Xie, Lingdong Kong, Wenwei Zhang, Jiawei Ren, Liang Pan, Kai Chen, Ziwei Liu

IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2024

- **Revisiting Physical-World Adversarial Attack on Traffic Sign Recognition: A Commercial Systems Perspective**

Ningfei Wang, Shaoyuan Xie, Takami Sato, Yunpeng Luo, Kaidi Xu, Qi Alfred Chen

Network and Distributed System Security Symposium (NDSS), 2025

- **Prompter Says: A Linguistic Approach to Understanding and Detecting Jailbreak Attacks Against Large-Language Models**

Dylan Lee, Shaoyuan Xie, Shagoto Rahman, Kenneth Pat, David Lee, Qi Alfred Chen

ACM Workshop on Large AI Systems and Models with Privacy and Safety Analysis (LAMPS), 2024

- **RoboDepth: Robust Out-of-Distribution Depth Estimation under Corruptions**

Lingdong Kong, Shaoyuan Xie, Hanjiang Hu, Lai Xing Ng, Benoit R Cottureau, Wei Tsang Ooi

Conference on Neural Information Processing Systems (NeurIPS), Datasets and Benchmarks Track, 2023

- **On the Adversarial Robustness of Camera-based 3D Object Detection**

Shaoyuan Xie, Zichao Li, Zeyu Wang, Cihang Xie

Transactions on Machine Learning Research (TMLR), 2024

INTERNSHIPS

Shanghai Artificial Intelligence Laboratory

Research Intern, OpenMMLab

Shanghai, CN

Jun 2023 - Aug 2023

- Developed fine-tuning dataset for [InternLM](#) to improve the coding ability
- Incorporated external Python executor to the LLM to improve mathematical reasoning ability, iteratively fine-tuned the LLM, which largely enhances the score on the GSM8k dataset

PROFESSIONAL EXPERIENCE

Workshop Organizer - [The RoboDrive Challenge](#)

IEEE International Conference on Robotics and Automation (ICRA)

Yokohama, JP

Jan 2024 - May 2024

- Developed competition [toolkit](#) for evaluation for all five tracks

Workshop Organizer - [The RoboDepth Challenge](#)

IEEE International Conference on Robotics and Automation (ICRA)

London, UK

Jan 2023 - May 2023

SKILLS

- **Programming Languages:** Python, C, Matlab
- **Machine Learning:** Autonomous Driving, BEV Perception, Adversarial Machine Learning, Large Language Models
- **Miscs:** ROS, MMDet, Vim, Tmux, Git, Latex

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