Shaoyuan Xie

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EDUCATION

University of California, Irvine

Irvine, CA Expected Jun 2028

Ph.D. in Computer Science

Huazhong University of Science and Technology (HUST)

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

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

Wuhan, CN Jun 2023

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 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 International Conference on Learning Representations (ICLR), 2025

• Benchmarking and Improving Bird's Eve 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 Cottereau, 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

Shanghai, CN Jun 2023 - Aug 2023

Research Intern, OpenMMLab

- 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

Yokohama, JP

IEEE International Conference on Robotics and Automation (ICRA)

Jan 2024 - May 2024

Developed competition toolkit for evaluation for all five tracks

London, UK

Workshop Organizer - The RoboDepth Challenge

Jan 2023 - May 2023

IEEE International Conference on Robotics and Automation (ICRA)

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