TINGHAO XIE

EDUCATION

Princeton University, Princeton, United States

08/2022 - Present

Ph.D. candidate, Electrical Computer Engineering (ECE)

• Advisor: Prof. Prateek Mittal

Princeton University, Princeton, United States

08/2022 - 09/2024

M.A., Electrical Computer Engineering (ECE)

Zhejiang University, Zhejiang, China

09/2018 - 06/2022

B.E., Computer Science and Technology (CS)

• **GPA**: 3.99/4.00 (92.07/100)

• Rank: 1st/186

University of Oxford, Oxford, United Kingdom

10/2021 - 12/2021

Visiting Student, Computer Science

• **GPA**: 4.00/4.00

• Courses: Machine Learning, Computational Learning Theory

♀ Research Interests

Safe AI; Secure and Reliable AI Systems; Robust and Adversarial ML.

PUBLICATIONS & MANUSCRIPTS

SORRY-Bench: Systematically Evaluating Large Language Model Safety Refusal Behaviors %, 🖹, 💠

Tinghao Xie*, Xiangyu Qi*, Yi Zeng*, Yangsibo Huang*, Udari Madhushani Sehwag, Kaixuan Huang, Luxi He, Boyi Wei, Dacheng Li, Ying Sheng, Ruoxi Jia, Bo Li, Kai Li, Danqi Chen, Peter Henderson, Prateek Mittal *Preprint (Under Review)*

Fantastic Copyrighted Beasts and How (Not) to Generate Them %, 🔼, 🥠

Luxi He*, Yangsibo Huang*, Weijia Shi*, **Tinghao Xie**, Haotian Liu, Yue Wang, Luke Zettlemoyer, Chiyuan Zhang, Danqi Chen, Peter Henderson

Preprint (Under Review)

AI Risk Management Should Incorporate Both Safety and Security 🔀

Xiangyu Qi, Yangsibo Huang, Yi Zeng, Edoardo Debenedetti, Jonas Geiping, Luxi He, Kaixuan Huang, Udari Madhushani, Vikash Sehwag, Weijia Shi, Boyi Wei, **Tinghao Xie**, Danqi Chen, Pin-Yu Chen, Jeffrey Ding, Ruoxi Jia, Jiaqi Ma, Arvind Narayanan, Weijie J Su, Mengdi Wang, Chaowei Xiao, Bo Li, Dawn Song, Peter Henderson, Prateek Mittal

Preprint (Under Review)

Assessing the brittleness of safety alignment via pruning and low-rank modifications %, 🔼 🐠

Boyi Wei*, Kaixuan Huang*, Yangsibo Huang*, **Tinghao Xie**, Xiangyu Qi, Mengzhou Xia, Prateek Mittal, Mengdi Wang, Peter Henderson *ICML* 2024

Fine-tuning Aligned Language Models Compromises Safety, Even When Users Do Not Intend To! %, 🔑, 🕩

Xiangyu Qi*, Yi Zeng*, **Tinghao Xie***, Pin-Yu Chen, Ruoxi Jia, Prateek Mittal[†], Peter Henderson[†] *ICLR 2024 (Oral)*

This work was exclusively reported by **B New York Times**, and covered by many other social medias!

BaDExpert: Extracting Backdoor Functionality for Accurate Backdoor Input Detection [2],

Tinghao Xie, Xiangyu Qi, Ping He, Yiming Li, Jiachen T. Wang, Prateek Mittal *ICLR* 2024

Towards A Proactive ML Approach for Detecting Backdoor Poison Samples %, 🖺, 🕠

Xiangyu Qi, **Tinghao Xie**, Jiachen T. Wang, Tong Wu, Saeed Mahloujifar, Prateek Mittal *USENIX Security Symposium 2023*

Revisiting the Assumption of Latent Separability for Backdoor Defenses %, 🔼 🕠

Xiangyu Qi*, **Tinghao Xie***, Yiming Li, Saeed Mahloujifar, Prateek Mittal *ICLR 2023*

Towards Practical Deployment-Stage Backdoor Attack on Deep Neural Networks %, 🔼, 🛷

Xiangyu Qi*, **Tinghao Xie***, Ruizhe Pan, Jifeng Zhu, Yong Yang and Kai Bu *CVPR 2022 (Oral)*

WORK EXPERIENCE

Meta GenAI (Media Safety Team), Menlo Park, United States

05/2024 - 08/2024

Research Intern

- Mentor: Li Chen
- Project: Red-teaming NSFW Image Classifiers and Text-to-Image System Safety

♥ Honors and Awards

Francis Robbins Upton Fellowship	08/2022
Outstanding Graduate Thesis	06/2022
Champion of Zhejiang University Bodybuilding Competition (70kg Level)	05/2022
Elite Liu Yongling Scholarship (1/802)	2020 - 2021
Tencent Scholarship (5/802)	2020 - 2021
The 2nd Class Prize in ASC 20-21 Student Supercomputer Challenge	01/2021
Narada Scholarship (1/372)	2019 - 2020
Champion of Zhejiang University DFM Hip-hop Crew Battle	2019

SERVICES

Reviewing for Neurips 2024, ICML 2024, ICLR 2024 Set LLM Workshop, Neurips 2023 (*Top Reviewer*), Neurips 2023 BUGS Workshop.

SKILLS

- Programming: C/C++, Python, JavaScript, CUDA, Verilog, Shell, MATLAB, ActionScript, HTML.
- **Software**: LATEX, Vivado, Adobe {Photoshop, Premiere Pro, After Effects, Audition}.
- Languages known: English(fluent), Chinese(native), Cantonese(native).
- Hobbies: Climbing, Skiing, Dance (Hip-hop, House, etc.), Power Lifting, Swimming, Basketball, Billiards.

Latest update date: 10/11/2024