

Harry Cheng

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About me

I am Harry Cheng (with the Chinese name Xuanang Cheng). I received my Ph.D. degree in June 2025 from the School of Computer Science and Technology, Shandong University (Qingdao), under the supervision of Prof. Liqiang Nie. From January 2023 to January 2024, I participated in an academic exchange at the National University of Singapore, supervised by Prof. Mohan Kankanhalli. My research interest includes multi-modal computing, deepfake detection, and diffusion-based models. The models we built have been applied to Tmall Genie and utilized by millions of users.

Education

- Sep 2021– **Doctor of Philosophy in Engineering, School of Computer Science and Technology.**
Jun 2025: Shandong University (Advisor: *Prof. Liqiang Nie*)
- Sep 2018– **Master of Engineering, School of Computer Science and Technology.**
Jun 2021 : Shandong University (Advisor: *Prof. Liqiang Nie*)
- Sep 2014– **Bachelor of Engineering, School of Software Engineering.**
Jun 2018 : Shandong University (Undergraduate Thesis Advisor: *Prof. Liqiang Nie*)

Experience

- Jun 2025– **Research Fellow, National University of Singapore.**
present: Research on deepfake detection and MLLM safety.
- Mar 2024– **Research Intern, Ant Group.**
Aug 2024: Research on safety and fairness of MLLMs.
- Jan 2023– **Visiting Student, National University of Singapore.**
Jan 2024: Research on i) deepfake detection; ii) efficient action recognition; iii) diffusion-based facial forgery detection.
- Mar 2022– **Research Intern, Alibaba Group.**
Sep 2022: Research on open-domain action recognition via cross-modal learning.
- Aug 2020– **Research Intern, Alibaba Group.**
Feb 2021: Research on multi-modal homogeneity modeling (visual, auditory, and text).
- Nov 2017– **Research Intern, Meituan.**
Aug 2018: Research on relation extraction to enhance understanding of user intention.

Research Interest

- **Multi-modal Computing:** We explore to narrow the gap among different modalities, such as mutual retrieval of voice and face.
- **Deepfake Detection:** We focus on forgery detection via multi-modal cues and are interested in detecting fake faces in wild videos.
- **Diffusion-based Models:** We conduct research on detecting facial forgeries synthesized by diffusion models.

Research

Publications

- 2025 **Harry Cheng**, Yangyang Guo, Qingpei Guo, Ming Yang, Tian Gan, Weili Guan, and Liqiang Nie. Social Debiasing for Fair Multi-modal LLMs. *ICCV*, 2025.
- 2024 **Harry Cheng**, Yangyang Guo, Tianyi Wang, Liqiang Nie, and Mohan Kankanhalli. Diffusion Facial Forgery Detection. In *ACM MM*, 2024.
- 2023 **Harry Cheng**, Yangyang Guo, Liqiang Nie, Zhiyong Cheng, and Mohan Kankanhalli. Sample Less, Learn More: Efficient Action Recognition via Frame Feature Restoration. In *ACM MM*, 2023.
- 2023 **(ESI Highly Cited Paper) Harry Cheng**, Yangyang Guo, Tianyi Wang, Qi Li, Xiaojun Chang, and Liqiang Nie. Voice-Face Homogeneity Tells Deepfake. In *ACM ToMM*, 2023.
- 2022 **Harry Cheng**, Lizi Liao, Linmei Hu, and Liqiang Nie. Multi-Relation Extraction via A Global-Local Graph Convolutional Network. In *IEEE TBD*, 2022.
- 2021 **Harry Cheng**, Yangyang Guo, Jianhua Yin, Haonan Chen, Jiafang Wang, and Liqiang Nie. Audio-driven Talking Video Frame Restoration. In *IEEE TMM*, 2021.

Submissions

- 2025 **Harry Cheng**, Ming-Hui Liu, Yangyang Guo, Tianyi Wang, Liqiang Nie, and Mohan Kankanhalli. Fair Deepfake Detectors Can Generalize. *Under Review, NeurIPS*, 2025.
- 2023 **Harry Cheng**, Yangyang Guo, Tianyi Wang, Liqiang Nie, and Mohan Kankanhalli. Towards Generalizable Deepfake Detection by Primary Region Regularization. *Under Review, ACM ToMM*, 2023.

Other

- 2025 Tianyi Wang, **Harry Cheng**, Xiao Zhang, and Yinglong Wang. NullSwap: Proactive Identity Cloaking Against Deepfake Face Swapping. *ICCV*, 2025.
- 2025 Tianyi Wang, **Harry Cheng**, Ming-Hui Liu, and Mohan Kankanhalli. FractalForensics: Proactive Deepfake Detection and Localization via Fractal Watermarks. *ACM MM*, 2025.
- 2025 Ming-Hui Liu, **Harry Cheng**, Tianyi Wang, Xin Luo, and Xin-Shun Xu. Learning Real Facial Concepts for Independent Deepfake Detection. *IJCAI*, 2025.
- 2025 Ming-Hui Liu, **Harry Cheng**, Xin Luo, and Xin-Shun Xu. Suppressing Gradient Conflict for Generalizable Deepfake Detection . *Under review, IEEE TPAMI*, 2025.
- 2024 Tianyi Wang, Mengxiao Huang, **Harry Cheng**, Xiao Zhang, and Zhiqi Shen. Proactive Deepfake Detection via Training-Free Landmark Perceptual Watermarks. *ACM MM*, 2024.
- 2024 Tianyi Wang, Mengxiao Huang, **Harry Cheng**, Bin Ma, and Yinglong Wang. Robust Identity Perceptual Watermark Against Deepfake Face Swapping. *Under Review, IEEE TPAMI*, 2024.
- 2023 Tianyi Wang, **Harry Cheng**, Kam Pui Chow, and Liqiang Nie. Deep Convolutional Pooling Transformer for Deepfake Detection. In *ACM ToMM*, 2023.
- 2022 Yangyang Guo, Liqiang Nie, **Harry Cheng**, Zhiyong Cheng, Mohan Kankanhalli, and Alberto Del Bimbo. On Modality Bias Recognition and Reduction. In *ACM ToMM*, 2022.
- 2021 Liqiang Nie, Mengzhao Jia, Xueming Song, Ganglu Wu, **Harry Cheng**, and Jian Gu. Multimodal Activation: Awakening Dialog Robots without Wake Words. In *ACM SIGIR*, 2021.

Services

- Reviewer for CVPR, ECCV, ICCV, ICML, ICLR, NeurIPS, ACM MM, etc.
- SAC / AC for COLING, ICME.
- Reviewer for IEEE TPAMI, IEEE TIP, IEEE TIFS, IEEE TKDE, IEEE TMM, ACM ToMM, IEEE TCSVT, etc.