

# Danni Xu

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## RESEARCH INTERESTS

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### Misinformation Detection · Fact-Checking · Digital Trust · Trustworthy AI

My research focuses on building reliable AI systems for detecting and understanding **misinformation and deceptive online content**. I work at the intersection of:

- **Multimodal misinformation detection**
- **Fact-checking and evidence grounding**
- **Large language / multimodal models**
- **LLM-agent systems for automated reasoning**

## EDUCATION

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### National University of Singapore

*PhD Student, School of Computing*

*Advisor: Prof. Mohan Kankanhalli*

*Aug 2022 – Present*

### Wuhan University

*M.S. Computer Science and Technology*

*Advisor: Prof. Ruimin Hu*

*Sep 2019 – Jun 2022*

### Wuhan University

*B.S. Computer Science and Technology*

*Sep 2015 – Jun 2019*

## PUBLICATIONS

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### Selected Publications

[Full List](#)

- **D. Xu**, S. Fan, H. Cheng, and M. Kankanhalli. (2026). “RW-Post: Auditable Evidence-Grounded Multimodal Fact-Checking in the Wild.” **PP-MisDet@CVPR 2026**.
- Z. Shen, S. Fan, **D. Xu**, T. Sim, and M. Kankanhalli. (2026). “Modeling Human Responses to Multimodal AI Content.” Accepted by *IEEE Computer*.
- K. Niu, **Danni Xu** (co-first author), B. Yang, W. Liu, Z. Wang. “Pioneering Explainable Video Fact-Checking with a New Dataset and Multi-role Multimodal Model Approach.” **AAAI 2025**.
- Y. Zhang, W. Liu, **Danni Xu**, Z. Zhou, Z. Wang. “Bi-causal: Group Activity Recognition via Bidirectional Causality.” **CVPR 2024**.
- **Danni Xu**, Shaojing Fan, Mohan Kankanhalli. “Combating Misinformation in the Era of Generative AI Models.” **ACM Multimedia 2023**.
- J. Wu, **Danni Xu**, W. Liu, J. Zhou, Y. Ong, S. Hu, H. Zhu, Z. Wang. “Assess and Guide: Multi-modal Fake News Detection via Decision Uncertainty.” **ACM MM Workshop on Multi-modal Misinformation 2024**.
- **Danni Xu**, Ruimin Hu, Zheng Wang, Linbo Luo, Dengshi Li, Wenjun Zeng. “Gaze- and Spacing-flow Unveil Intentions: Hidden Follower Discovery.” **ACM Multimedia 2022**.
- **Danni Xu**, Ruimin Hu, Zixiang Xiong, Zheng Wang, Linbo Luo, Dengshi Li. “Trajectory is not Enough: Hidden Following Detection.” **ACM Multimedia 2021**.

## RESEARCH EXPERIENCE

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### National University of Singapore

*PhD Research*

*2022 – Present*

- Research on **multimodal misinformation detection** and **fact-checking**.
- Construct datasets and benchmarks for **explainable multimodal misinformation reasoning**.
- Explore **LLM-based reasoning systems** and **agent-based fact-checking pipelines**.
- Develop **video fact-checking** and **multimodal evidence grounding** methods.

### Huawei Singapore, Digital Trust Lab

*Research Intern*

*2025 Aug. – 2026 Apr.*

- Proposed a research project on **fake review detection** for **digital trust** applications.
- Developed an **LLM-agent-based automated feature engineering system** that iteratively generates and refines discriminative features for fake review detection.

- Conduct experiments to improve detection accuracy and cross-domain generalization.

## **Wuhan University**

### ***Hidden Following Detection Research***

2020 – 2022

- Proposed a framework for detecting **hidden followers** in surveillance videos.
- Introduced **gaze pattern features** for human behavior recognition.
- Built the **Hidden Following Dataset (HFD)**.
- Improved detection performance by **11% F1 score**.

## **ACADEMIC SERVICE**

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**Reviewer:** ACM Multimedia (ACM MM) 2026; ACM Multimedia (ACM MM) 2025; LREC-COLING 2024; A2A-MML Workshop (CVPR 2026)

## **SKILLS**

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**Research Areas:** Misinformation Detection, Fact-Checking, Digital Trust, Trustworthy AI

**Programming:** Python, PyTorch, Scikit-learn

**Methods:** LLMs, Multimodal Models, Feature Engineering, Agent-based Systems, Machine Learning

## **SELECTED AWARDS**

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- Outstanding Graduate, Wuhan University 2022
- Excellent Academic Scholarship, Wuhan University 2020
- Outstanding Student Scholarship, Wuhan University 2018
- National First Prize, National University IoT Design Competition 2018