

# Hanzhi Zhang

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## RESEARCH INTERESTS

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Responsible AI, AI Hallucination, Small Language Models, LLMs

## EDUCATION

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- University of North Texas (UNT)** Aug. 2023 - present  
PhD Student, Computer Science  
Advisors: Dr. Yunhe Feng
- University of Birmingham (UoB)** Sept. 2021 - Dec. 2022  
MS, Data Science with Distinction
- Xiamen University (XMU)** Sept. 2017 - Aug. 2021  
BS, Computer Science and Technology (Honours)

## PROFESSIONAL EXPERIENCE

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- Responsible AI Lab** Denton, TX  
Graduate Research Assistant, Responsible AI Aug. 2023 - present
- OPPO, Inc.** Shenzhen, China  
Storage Backend Intern, File System Aug. 2020 - Apr. 2021

## PUBLICATIONS

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- ◇ **Hanzhi Zhang**, Heng Fan, Weijian Zheng, Yan Huang, and Yunhe Feng. Large Language Models are Biased to Detect Hallucination across Languages. In *The 39th Annual AAAI Conference on Artificial Intelligence*, 2025 [Under review].
- ◇ **Hanzhi Zhang**, Kewei Sha, Heng Fan, Song Fu, and Yunhe Feng. EchoVision: Echo of Distant Objects Enhances Trustworthiness in Vision-based Autonomous Systems. In *ACM/IEEE Symposium on Edge Computing*, 2024 [Under review].

## PROFESSIONAL ACTIVITIES

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### Conference & Journal External Reviewer

- ◇ External referee for the WWW 2024, AAAI 2024, WACV 2024, Inscrypt 2023

### Conference & Journal Reviewer

- ◇ Reviewer for the IEEE ICPADS 2023

## ACADEMIC PROJECTS

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### Use AI to Enhance Trustworthiness by detecting distance objects in Vision-based Autonomous Systems

Nov. 2023 - Feb. 2024

- ◇ Introduced EchoVision, an AI-driven framework that boosts user trust in autonomous technologies by highlighting potential environmental hazards
- ◇ EchoVision detects and alerts users to distant objects, each smaller than  $24 \times 24$  pixels
- ◇ EchoVision fine-tuned AI models from the Segment Anything Model (SAM) to detect distant objects like static structures, humans, and vehicles, enhancing situational awareness

### Multilingual LLMs Hallucination Detection and Mitigation

Nov. 2023 - Feb. 2024

- ◇ Introduced **Poly-FEVER**, a vast **multilingual dataset** with **800,000 fact claims** in **11 languages**, tailored for hallucination detection tasks
- ◇ Investigated multilingual hallucination causes using **LDA for topic analysis** and **automated web searches** to assess resource imbalances
- ◇ Proposed a **mitigation plan** leveraging **LDA** and **RAG** strategy to address linguistic discrepancies and resource imbalances for enhanced information verification

## OPEN SOURCE CONTRIBUTIONS

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- ◇ **[CubeFS]**: Distributed File System

## SKILLS & PROFICIENCY

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- ◇ **Programming Languages:** Python, C, C++, Golang, Shell, SQL, Rust
- ◇ **Software & Tools:** Linux, Docker, Git, Cmake, Makefile
- ◇ **Frameworks & Libraries:** PyTorch, TensorFlow, OpenCV, Django
- ◇ **Databases:** MySQL, PostgreSQL