Lingyu Zhang

Ph.D. Student, Duke University,
Email: lingyu.zhang@duke.edu| website | gscholar

RESEARCH INTERESTS

Embodied AI: Robot Learning & Perception, Policy Transfer, Human-AI teaming, World Models

EDUCATION

Duke University
Ph.D. Electrical & Computer Engineering — 2028 (Expected)
Advisor: Boyuan Chen

Columbia University
M.S. Electrical Engineering — 02/2023

Nanjing University
B.E. Microelectronic Science & Engineering — 06/2021

PUBLICATIONS

1. Zhengran Ji, **Lingyu Zhang**, Paul Sajda, Boyuan Chen. Enabling Multi-Robot Collaboration from Single-Human Guidance, ICRA 2025.
2. **Lingyu Zhang**, Mitchell Wang, Boyuan Chen. Scientific Judgment Drifts Over Time in AI Ideation, Preprint 2025.
3. **Lingyu Zhang**, Zhengran Ji, Nicholas R Waytowich, Boyuan Chen. GUIDE: Real-Time Human-Shaped Agents, Neurips 2024.
4. **Lingyu Zhang**, Zhengran Ji, Boyuan Chen. CREW: Facilitating Human-AI Teaming Research, TMLR 2024.
5. Mingyang Zhou, **Lingyu Zhang**, Sophia Horng, Maximillian Chen, Kung-Hsiang Huang, Shih-Fu Chang. M2-TabFact: Multi-Document Multi-Modal Fact Verification With Visual and Textual Representations of Tabular Data, ACL Findings 2025.
6. Kung-Hsiang Huang, Mingyang Zhou, Hou Pong Chan, Yi R Fung, Zhenhailong Wang, **Lingyu Zhang**, Shih-Fu Chang, Heng Ji. Do LVLMs Understand Charts? Analyzing and Correcting Factual Errors in Chart Captioning, ACL Findings 2024.
7. **Lingyu Zhang***, Chengzhi Mao*, Junfeng Yang, Carl Vondrick. Robust Video Perception by Seeing Motion, Arxiv 2023.
8. Chengzhi Mao, **Lingyu Zhang**, Abhishek Vaibhav Joshi, Junfeng Yang, Hao Wang, Carl Vondrick. Robust Perception through Equivariance, ICML 2023.
9. Bangpeng Xiao, Shenyuan Ye, Xicai Li, Min Li, **Lingyu Zhang**, Yuanqing Wang. A Stereo Matching Method for Three-Dimensional Eye Localization of Autostereoscopic Display, ICIG 2021.

IN PREPARATION

Lingyu Zhang, Boyuan Chen. Zero-shot Policy Transfer Across Extreme Fidelity Gaps, 2026
Developed a novel method that enables a navigation policy trained on extremely low-fidelity simulators to transfer to photo-realistic simulators.

Lingyu Zhang*, Easop Lee*, Boyuan Chen. Towards Real-time Object Navigation, 2026
Built an zero-shot vision-language navigation system capable of transferring semantics across environments. Contributed to task understanding, semantics-guided exploration & planning, and object detection modules.

PAST RESEARCH EXPERIENCE

Graduate Research Assistant, Columbia University

Vision-Language Fact Verification & Understanding. 02/2023 - 08/2023
Advisors: Shih-Fu Chang & Mingyang Zhou
Developed a multi-modal dataset for fact-checking across visual-language data. Benchmarked VLMs' finetuning and zero-shot performance.

Robust Vision Models. 02/2022 - 11/2022
Advisors: Junfeng Yang & Carl Vondrick
Designed a novel test-time adversarial defense for video models using motion consistency. Studied a novel defense method based on dense equivariant properties of neural networks.

Undergraduate Researcher, Nanjing University

Learned Image Compression. 12/2020 - 06/2021
Advisor: Prof. Qiu Shen
Implemented an end-to-end learned image compression model using an entropy-constrained variational autoencoder with a multi-scale encoder.

TECHNICAL SKILLS

Programming: Python, C#, Bash
Frameworks & Tools: PyTorch, JAX, Huggingface Transformers, vLLM, Stable-Baselines, CleanRL, TorchRL, Docker, Weights & Biases, Hydra
Simulation: Gymnasium, MuJoCo, Habitat, Unity

SERVICE

Peer Review
CoRL 2025 & 2026; Neurips 2026.
Mentorship
Zhengran Ji - Human-AI Teaming
Mitchell Wang - AI-driven Scientific Ideation
Teaching Assistant
Robot Learning - Fall 2025, Duke University

LEADERSHIP

PhD Representative ECE, Engineering Graduate Student Council, Duke University 2025-present
Career Chair, Graduate Electrical Engineering Council, Columbia University 2022
President, Nanjing University Hip-Hop Association 2018-2019
Class Representative, Nanjing University 2017-2018