

# Lingyu Zhang

Ph.D. Student, Duke University,

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## RESEARCH INTERESTS

Embodied AI: Robot Learning & Perception, Policy Transfer, Human-in-the-loop RL

## 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. **Lingyu Zhang\***, Easop Lee\*, Boyuan Chen. RTNav: Towards Real-time Zero-Shot Object Navigation. Preprint 2026.
2. Zhengran Ji, **Lingyu Zhang**, Paul Sajda, Boyuan Chen. Enabling Multi-Robot Collaboration from Single-Human Guidance, ICRA 2025.
3. **Lingyu Zhang**, Mitchell Wang, Boyuan Chen. Scientific Judgment Drifts Over Time in AI Ideation, Preprint 2025.
4. **Lingyu Zhang**, Zhengran Ji, Nicholas R Waytowich, Boyuan Chen. GUIDE: Real-Time Human-Shaped Agents, Neurips 2024.
5. **Lingyu Zhang**, Zhengran Ji, Boyuan Chen. CREW: Facilitating Human-AI Teaming Research, TMLR 2024.
6. 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.
7. 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.
8. **Lingyu Zhang\***, Chengzhi Mao\*, Junfeng Yang, Carl Vondrick. Robust Video Perception by Seeing Motion, Arxiv 2023.
9. Chengzhi Mao, **Lingyu Zhang**, Abhishek Vaibhav Joshi, Junfeng Yang, Hao Wang, Carl Vondrick. Robust Perception through Equivariance, ICML 2023.
10. 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.

## PAST RESEARCH EXPERIENCE

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### 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

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**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

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### Peer Review

CoRL 2025, 2026

Neurips 2026

### Mentorship

Zhengran Ji - Human-AI/Robot Teaming

Mitchell Wang - AI-driven Scientific Ideation

### Teaching Assistant

Robot Learning - Fall 2025, Duke University

Being a Successful ECE Masters Student - Fall 2026, Duke University

## LEADERSHIP

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**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