

Mellon M. Zhang

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 Mellon (Meilong) Zhang |  [meilongzhang](https://github.com/meilongzhang) |  Mellon M. Zhang |  [meilongzhang](https://twitter.com/meilongzhang)

Atlanta, Georgia - Citizenship: US

RESEARCH INTERESTS

My research focuses on enabling reliable real-world deployment of perception-driven robotic systems and foundation models. I work across three areas: real-time inference and latency coordination, world modeling and spatiotemporal reasoning, and closed-loop uncertainty-aware perception-action systems. My current interests include end-to-end (E2E) networks and vision-language-action (VLA) models for robotics and autonomous driving.

EDUCATION

- **Georgia Institute of Technology** Aug 2023 - Current
Ph.D. in Machine Learning, advised by Prof. Glen Chou Atlanta, USA
- **University of California, Berkeley** Aug 2019 - May 2023
B.A. in Computer Science Berkeley, USA

PAPERS

**=EQUAL CONTRIBUTION, C=CONFERENCE, W=WORKSHOP, S=IN SUBMISSION, P=IN PREPARATION*

- [S.2] C. Huang*, M. M. Zhang*, R. Azarcon, G. Chou, and Z. Kira. **MAPS: Preserving Vision-Language Representations via Module-Wise Proximity Scheduling for Better Vision-Language-Action Generalization**. 2025. *Under review*. [\[arXiv\]](#) [\[site\]](#)
- [C.1] M. M. Zhang, G. Chou, and S. Mukhopadhyay. **Towards Streaming LiDAR Object Detection with Point Clouds as Egocentric Sequences**. In *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2026. [\[arXiv\]](#)
- [W.1] M. M. Zhang and G. Chou. **Polar Hierarchical Mamba**. In *Workshop on 4D Vision: Modeling the Dynamic World @ CVPR*, 2025. [\[pdf\]](#)
- [S.1] M. M. Zhang, H. Kumawat, and S. Mukhopadhyay. **DFDNet: Directional Feature Diffusion for Efficient Fully-Sparse LiDAR Object Detection**. 2024. *Under review*. [\[pdf\]](#)
- [P.1] M. M. Zhang. **spkan: Sparse Convolutions with Kolmogorov-Arnold Networks**, 2024. *In preparation*. [\[github\]](#)

EXPERIENCE

- **Trustworthy Robotics Lab** Jul 2025 - Current
Graduate Research Assistant - Advisor: Prof. Glen Chou Atlanta, USA
 - Projects: Vision-language-action models, autonomous driving, 3D perception.
- **Gigascale Reliable Energy-Efficient Nanosystem Lab** Aug 2023 - Jul 2025
Graduate Research Assistant - Advisor: Prof. Saibal Mukhopadhyay Atlanta, USA
 - Projects: Efficient perception
- **Knight Lab** Aug 2021 - May 2023
Undergraduate Research Assistant - Advisor: Prof. Robert Knight Berkeley, USA
 - Projects: LLM interpretability

HONORS AND AWARDS

- **Lambda Labs Research Grant** Jul 2025
Compute funding for research on active uncertainty mitigation in autonomous driving.
- **UC Berkeley Rose Hills Fellowship** May 2022
Merit-based fellowship for independent summer research funding. One of 45 recipients selected university-wide.
- **Georgia Tech SURE Fellowship** May 2021
Merit-based summer research internship. One of 50 recipients selected nationally.

SERVICE AND TEACHING

- **Teaching:** Graduate Teaching Assistant, AE 2610 Intro Experimental Methods in Aerospace, Fall 2025
- **Program Committee:** CoRL ('25)
- **Project ENGAGES**, one-on-one research mentorship with high school student from Atlanta area. 2025-2026
- **Computer Science Mentors**, undergraduate tutor for CS61B: Data Structures 2020-2022

SKILLS

- **Programming:** Python (PyTorch, Tensorflow, Scikit-learn etc.), C++, CUDA, LaTeX, Java, Javascript, C, RISC-V
- **Development:** Linux, bash, Git, SLURM, HPC