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# Mellon Zhang

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US Citizen  
Atlanta, GA

## EDUCATION

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### Georgia Institute of Technology

Atlanta, GA

*M.S. in Electrical and Computer Engineering, GPA: 4.0/4.0*

*Aug 2023 - Expected May 2025*

- **Advisor:** Prof. Saibal Mukhopadhyay
- **Concentrations:** Machine Learning, Digital Signal Processing
- **Coursework:** Advanced Programming Techniques, High Performance Computer Architecture, Mathematical Foundations of Machine Learning, Optimal Control and Optimization

### University of California, Berkeley

Berkeley, CA

*B.A. in Computer Science, GPA: 3.9/4.0*

*Aug 2019 - May 2023*

- **Coursework:** Linear Algebra & Differential Equations, Data Science, Database Systems, Algorithms, Data Structures, Robotics, Optimization, Artificial Intelligence, Computer Architecture, Discrete Mathematics, CS Theory

## Preprints

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*\* indicates equal contribution*

- : **M. M. Zhang**, H. Kumawat, and S. Mukhopadhyay. DFDNet: Directional feature diffusion for efficient fully-sparse lidar object detection. 2025. *Under Review*. [Link](#).

## RESEARCH EXPERIENCE

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### Gigascale Reliable Energy-Efficient Nanosystem (GREEN) Lab

Atlanta, GA

*Graduate Research Assistant - Advisor: Prof. Saibal Mukhopadhyay*

*Aug 2023 - Current*

- **Efficient Fully-Sparse LiDAR Object Detection**
- **Keywords:** Pytorch, convnets, DDP, self-driving
- Manuscript under review

### Knight Lab

Berkeley, CA

*Research Intern - Advisor: Prof. Robert T. Knight*

*Aug 2021 - Aug 2022*

- **Explaining Large Language Models from Neuroscience Perspective**
- **Keywords:** Prompt engineering, fine-tuning, dataset creation, explainable AI
- Awarded UC Berkeley Rose Hills Fellowship for independent research.

### Gigascale Reliable Energy-Efficient Nanosystem (GREEN) Lab

Atlanta, GA

*Gatech SURE Research Intern - Advisor: Prof. Saibal Mukhopadhyay*

*May 2021 - Aug 2021*

- **Associative Memories for Robust Image Classification**
- **Keywords:** hopfield networks, Tensorflow, image classification, network design
- 2nd place of 50 in Georgia Tech SURE Symposium

## INVOLVEMENT

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- **Computer Science Mentors:** Teach weekly small-group sections for CS61B(Data Structures), design worksheets and prepare final exam review materials. Average rating of 4.9/5 over two semesters. Topics include TDD methodology, Java, asymptotics, disjoint sets, search trees, maps, B+ trees, hashing & sorting, heaps, priority queues, graphs.
- **UC Berkeley URAP:** Implemented and fine-tuned BERT model for sentiment analysis on European parliamentary questions.

## SKILLS

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**Languages:** Python (PyTorch, Tensorflow, Scikit-learn etc.), C++, CUDA, LaTeX, Java, Javascript, C, RISC-V