

# Zhen Zhang

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## Education

### University of California, Santa Barbara (UCSB)

Sept. 2023 – Present

PhD in Computer Science, Advised by Prof. [Xin Eric Wang](#)

California, USA

- **Research Interests:** Reasoning, LLMs, Multimodality and Efficiency
- **Teaching Assistant:** CS 130A Data Structures and Algorithms, CS 8 Introduction to Computer Science

### Tsinghua University

Sept. 2019 – June 2023

B.Sc. in Physics

Beijing, China

- **Awards & Honors:** Academic Excellence Scholarship (2021, 2022)

## Publications

\* indicates equal contribution

- **Zhen Zhang\***, Kaiqiang Song, Xun Wang, Yebowen Hu, Weixiang Yan, Chenyang Zhao, Henry Peng Zou, Haoyun Deng, Sathish Reddy Indurthi, Shujian Liu, Simin Ma, Xiaoyang Wang, Xin Eric Wang, Song Wang “[CM2: Reinforcement Learning via Checklist Reward for Multi-Turn Multi-Step Agentic Tool Use](#)” (In progress)
- **Zhen Zhang\***, Xuehai He\*, Weixiang Yan, Ao Shen, Chenyang Zhao, Shuohang Wang, Yelong Shen, Xin Eric Wang “[Soft Thinking: Unlocking the Reasoning Potential of LLMs in Continuous Concept Space](#)” (NeurIPS 2025)
- **Zhen Zhang**, Yifan Yang, Kai Zhen, Nathan Susanj, Athanasios Mouchtaris, Siegfried Kunzmann, Zheng Zhang. “[MaZO: Masked Zeroth-Order Optimization for Multi-Task Fine-Tuning of Large Language Models](#)” (EMNLP 2025)
- **Zhen Zhang**, Guanhua Zhang, Bairu Hou, Wenqi Fan, Qing Li, Sijia Liu, Yang Zhang, Shiyu Chang. “[Certified Robustness for Large Language Models with Self-Denoising](#)” (NAACL 2024)
- **Zhen Zhang**, Jialu Wang, Xin Eric Wang. “[Parameter-Efficient Cross-lingual Transfer Learning of Vision and Language Models via Translation-based Alignment](#)” (EMNLP 2023)
- Yifan Yang, **Zhen Zhang**, Rupak Vignesh Swaminathan, Jing Liu, Nathan Susanj, Zheng Zhang. “[SharpZO: Hybrid Sharpness-Aware Vision Language Model Prompt Tuning via Forward-Only Passes](#)” (NeurIPS 2025)
- Yujia Qin, Shengding Hu, ..., **Zhen Zhang**, ..., Tongshuang Wu, Heng Ji, Zhiyuan Liu, Maosong Sun. “[Parameter-Efficient Cross-lingual Transfer Learning of Vision and Language Models via Translation-based Alignment](#)” (ACM Computing Surveys, CSUR)
- Shengding Hu, Ning Ding, Weilin Zhao, Xingtai Lv, **Zhen Zhang**, Zhiyuan Liu, Maosong Sun. “[OpenDelta: A Plug-and-play Library for Parameter-efficient Adaptation of Pre-trained Models](#)” (ACL 2023)
- Shengding Hu\*, **Zhen Zhang\***, Ning Ding, Yadao Wang, Yasheng Wang, Zhiyuan Liu, Maosong Sun. “[Sparse Structure Search for Parameter-Efficient Tuning](#)” (NeurIPS 2022)

## Internship Experience

### Zoom, GenAI

June 2025 – Sep. 2025

Research Intern, advised by [Kaiqiang Song](#) and [Song Wang](#)

- Worked on Tool Use Agent. We proposed RL with Checklist Reward for Multi-Turn Multi-Step Agentic Tool Use.

### Microsoft STCA, WebXT-Search&Distribution

April 2024 – Sep. 2024

MLE, advised by [Gong Ming](#) and [Wenbiao Ding](#)

- Optimized Bing Search models to generate TL;DR in RAG scenarios. Designed and implemented pipelines for high-quality training data generation. Applied DPO to empower LLMs to reject inappropriate or unanswerable user queries when search results were insufficient, ensuring response reliability and minimizing hallucination risks.