

# Zhen Zhang

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## Education

<b>University of California, Santa Barbara (UCSB)</b> <i>PhD in Computer Science, Advised by Prof. Xin Eric Wang</i>	<i>Sept. 2023 – Present</i> <i>California, USA</i>
<b>Tsinghua University</b> <i>B.Sc. in Physics</i>	<i>Sept. 2019 – June 2023</i> <i>Beijing, China</i>

## 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 Chen, 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

<b>Zoom, GenAI</b> <i>Research Intern, advised by Kaiqiang Song and Song Wang</i>	<i>June 2025 – Sep. 2025</i>
• Worked on Tool Use Agent. We proposed RL with Checklist Reward for Multi-Turn Multi-Step Agentic Tool Use.	

<b>Microsoft STCA, WebXT-Search&amp;Distribution MLE</b> <i>MLE, advised by Gong Ming and Wenbiao Ding</i>	<i>April 2024 – Sep. 2024</i>
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- 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.