YIFAN ZENG PhD Student

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EDUCATION

Oregon State University — Corvallis, United States
Ph.D. in Computer Science — 2023 - 2029 *(expected)*
- Advisor: Prof. Huazheng Wang
- Research Area: Robust LLMs Reasoning and Decision Making & Agantic AI

Zhuhai College of Jilin University — Zhuhai, China
B.E. in Data Science — 2019 - 2023
- GPA: 3.84/4.00, Rank: 1/249
- First-tier Academic Performance Scholarship for 3 consecutive years
- Served as director for the department's research lab (2020 - 2022)
- Outstanding Graduate Award, 2023
- Thesis: Semi-Supervised Deep Learning on Computer Vision Tasks

PUBLICATIONS

1. Jiahao Qiu, Yifu Lu, **Yifan Zeng**, Jiacheng Guo, Jiayi Geng, Huazheng Wang, Kaixuan Huang, Yue Wu, Mengdi Wang. **TreeBoN: Enhancing Inference-Time Alignment with Speculative Tree-Search and Best-of-N Sampling**, *arXiv preprint arXiv:2410.16033*, 2024.

2. Hui Yuan, **Yifan Zeng**, Yue Wu, Huazheng Wang, Mengdi Wang, Liu Leqi. **A Common Pitfall of Margin-based Language Model Alignment: Gradient Entanglement**, *arXiv preprint arXiv:2410.13828*, 2024. (NeurIPS 2024 Workshop AFM)

3. **Yifan Zeng**, Ojas Tendolkar, Raymond Baartmans, Qingyun Wu, Lizhong Chen, Huazheng Wang. **LLM-RankFusion: Mitigating Intrinsic Inconsistency in LLM-based Ranking**, *arXiv preprint arXiv:2406.00231*, 2024. (NeurIPS 2024 Workshop SFLLM)

4. **Yifan Zeng**, Yiran Wu, Xiao Zhang, Huazheng Wang, Qingyun Wu. **AutoDefense: Multi-Agent LLM Defense against Jailbreak Attacks**, *arXiv preprint arXiv:2403.04783*, 2024. (NeurIPS 2024 Workshop SafeGenAi)

5. Jianqi Yan, Junjie Luo, **Yifan Zeng**, Alex P Leung, Jie Feng, Hong-Hao Zhang, Weipeng Lin. **Modeling the Time Evolution of Compact Binary Systems with Machine Learning**, *The Astrophysical Journal 973 (2), 163*, 2024.

6. Jianqi Yan, **Yifan Zeng**, Junhong Lin, Jinrui Fan, Chuanyu Fang, Yong Cai. **Enhanced Object Detection in Pediatric Bronchoscopy Images using YOLO-based Algorithms with CBAM Attention Mechanism**, *Heliyon 10 (12)*, 2024.

7. Wei Lv, Tao Chen, **Yifan Zeng**, Weihong Liu, Chuying Huang. **A challenge of deep-learning-based object detection for hair follicle dataset**, *Journal of Cosmetic Dermatology 22 (9), 2565-2578*, 2023.

8. **Yifan Zeng**, Aohui Pang, Wei Lv, Xiaolin Zhu. **Task-Level Consistency Semi-Supervised Based Domain Adaptation for Lung Nodules Segmentation**, *Computer and Information Science, 181-196*, 2022.

PROJECTS

Railway Defect Detection via Self-Supervised Learning on Ultrasound Data
Quanbao Network Technology Co., Ltd. — 2022.09 - 2023.12

Context-Aware Video Object Detection on Medical Tasks
Quanbao Network Technology Co., Ltd. — 2022.03 - 2023.12

Last updated: December 18, 2024

EXPERIENCE **Teaching Assistant** | Oregon State University 2024.09 - 2025.06
- CS 550 - Introduction to Computer Graphics
- CS 512 - Data Science Tools and Programming
- CS 546 - Networks in Computational Biology

Research Assistant | Oregon State University 2024.03 - 2024.09

Research Scientist | Quanbao Network Technology Co. Ltd. 2022.04 - 2023.08
- Developed novel semi-supervised learning algorithms and architectures to tackle complex domain-specific visual recognition tasks with limited labeled data
- Led research collaborations with medical institutions and railway corporation, delivering SOTA solutions for medical imaging analysis and industrial defect detection

SWE Intern | Zhuhai Xiangyi Aviation Technology Co. Ltd. 2021.10 - 2022.01
- Designed data analysis and visualization solutions for pilot training.
- Led the development of a pilot training tracking platform.

SERVICE
- **Reviewer** WWW 2025, AAAI 2025

SKILLS **Expertise**:

- LLM Agent Design, RLHF, LLM Fine-Tuning
- Self-Supervised Learning, Object Detection, Segmentation, Medical Image
- Experiment Implementation & Tracking, Parallel Training

Frameworks / Libraries:

`PyTorch`, 🤗`Transformers`, `Wandb`, `PyTorch Lightning`, `AutoGen`

Programming:

`Python`, `C/C++`