# Yifan Yang

Research Assistant | M.Sc. in Artificial Intelligence and Robotics
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## Summary

Research assistant advised by Prof. Pinjia He and M.Sc. student working at the intersection of AI for Software Engineering and AIOps, with a focus on microservice diagnostics, observability, and AI-assisted troubleshooting.

## Education

**M.Sc.** **The Chinese University of Hong Kong, Shenzhen** Sep 2024 – Present
*Artificial Intelligence and Robotics* Shenzhen
- School of Data Science.

**B.Mgt.** **Shandong University** Sep 2019 – Jun 2023
*Industrial Engineering* Jinan
- Training in systems thinking, optimization, and engineering practice.

## Experience

**Research Assistant** Aug 2024 – present
**The Chinese University of Hong Kong, Shenzhen** Shenzhen
- Work under the supervision of Prof. Pinjia He at the School of Data Science.
- Conduct research in AI for Software Engineering and AIOps, with an emphasis on microservice diagnostics, root cause analysis, observability, and fault-propagation-aware evaluation.
- Contribute to end-to-end research workflows across multiple projects, including system implementation, telemetry and data collection, fault injection, system integration, baseline reproduction, and performance evaluation.
- First author of Gleaner, an online sampling framework for microservice diagnostics accepted at ISSTA 2026.

## Publications

**Gleaner: A Semantically-Rich and Efficient Online Sampler for Microservice Diagnostics** Apr 2026
**Yifan Yang**, Aoyang Fang, Songhan Zhang, Pinjia He*
*Accepted at ISSTA 2026* [PDF][code]

**Rethinking the Evaluation of Microservice RCA with a Fault Propagation-Aware Benchmark** Oct 2025
Aoyang Fang, Songhan Zhang, **Yifan Yang**, Haotong Wu, Junjielong Xu, Xuyang Wang, Rui Wang, Manyi Wang, Qisheng Lu, Pinjia He*
*Accepted at FSE 2026* [PDF]

**DynaCausal: Dynamic Causality-Aware Root Cause Analysis for Distributed Microservices** Oct 2025
Songhan Zhang, Aoyang Fang, **Yifan Yang**, Ruiyi Cheng, Xiaoying Tang, Pinjia He*
*Under peer review (ASE 2026 submission)* [PDF]

**Metis: An Interpretable and Unified Troubleshooting Framework for Microservices using Multi-modal Data** 2024
Zhouruixing Zhu, **Yifan Yang**, Aoyang Fang, Yidan Wang, Pinjia He*
*Under review at ACM Transactions on Software Engineering and Methodology (TOSEM)*

## Projects

**Gleaner** — Diagnosis-oriented online trace sampling for microservice observability.

**chaos-experiment** — Fault injection tooling for microservice troubleshooting experiments.

**Aegis** — Experiment tooling and systems engineering workspace for AIOps research.

## Skills

**Research Areas:** AI for Software Engineering, AIOps, microservice diagnostics, root cause analysis, observability
**Systems:** Linux, Docker, Kubernetes, Helm, Skaffold, OpenTelemetry, Jaeger
**Programming:** Python, Go, Shell, SQL
**ML and LLM:** PyTorch, vLLM, LLM fine-tuning, inference optimization
**Languages:** Chinese (Native), English (IELTS 6.5)