Aoyang Fang

Ph.D. Student, School of Data Science, The Chinese University of Hong Kong, Shenzhen

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🌐 https://profile.aoyangfang.top/ ● https://github.com/Lincyaw

Research Interests

My research focuses on leveraging AI for Software Engineering, particularly LLM-based approaches, to advance root cause localization and enhance the stability, reliability, and resilience of large-scale software systems.

Education

Ph.D. in Computer Science — 2024 – Present
The Chinese University of Hong Kong, Shenzhen — Shenzhen, China

MPhil. in Computer Information and Engineering — 2023 – 2024
The Chinese University of Hong Kong, Shenzhen — Shenzhen, China

B.Sc. in Computer Science and Technology — 2018 – 2022
Harbin Institute of Technology, Shenzhen — Shenzhen, China

Publications

[1] A. Fang, H. Yang, H. Dong, Q. Lu, J. Xu, and P. He, "A goal-driven survey on root cause analysis," *arXiv preprint arXiv:2510.19593*, 2025.

[2] A. Fang, S. Zhang, Y. Yang, H. Wu, J. Xu, X. Wang, R. Wang, M. Wang, Q. Lu, and P. He, "An empirical study of sota rca models: From oversimplified benchmarks to realistic failures," *arXiv preprint arXiv:2510.04711*, 2025.

[3] Z. Yu*, A. Fang*, M. Ma, *et al.*, "Triangle: Empowering incident triage with multi-agent," *Proceedings of the 40th IEEE/ACM International Conference on Automated Software Engineering (ASE)*, 2025, pp. 1–12.

[4] Q. Mang*, A. Fang*, B. Yu, H. Chen, and P. He, "Testing graph database systems via equivalent query rewriting," *Proceedings of the IEEE/ACM 46th International Conference on Software Engineering (ICSE)*, 2024, pp. 1–12.

[5] A. Fang, R. Zhou, X. Tang, and P. He, "Rpcover: Recovering grpc dependency in multilingual projects," *2023 38th IEEE/ACM International Conference on Automated Software Engineering (ASE)*, IEEE, 2023, pp. 1930–1939.

Professional Experience

Research Intern — 2025.8 – now
Bytedance ByteBrain
Led the research on root cause analysis

Research Intern — 2025.1 – 2025.5
Microsoft Research Asia
Led the research on automated incident triage

Full-time Backend Developer — 2022.3 – 2022.9
Shopee Pte. Ltd
Backend development and system implementation

Academic Service

Artifact Evaluation Committee:

- 2025: ICSE, USENIX Security
- 2024: ISSRE, ATC, OSDI, ISSTA, ECOOP, TACAS

Reviewer:

- TOSEM 2024

Teaching Assistant:

- CSC4001 Software Engineering, Spring 2025
- CSC1001 Introduction to Computer Science: Programming Methodology, Fall 2025
- AIE1001 Introduction to AI Programming, Fall 2025

Awards & Honors

- School of Data Science Merit Scholarship, 2024
- The 1st China Graduate Operating System Open Source Innovation Competition, Third Prize, 2024
- ECOOP'24 Distinguished Artifact Reviewer Award, 2024
- ASE'23 Distinguished Paper Award of Industry Challenge Track, 2023
- National Student Computer System Ability Competition, Operating System Design Competition, Second Prize, 2021
- Harbin Institute of Technology (Shenzhen) Undergraduate Academic Scholarship, 2021
- Harbin Institute of Technology (Shenzhen) "Outstanding Student Leaders" Scholarship, 2021