Yintong Huo

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Education

PhD, The Chinese University of Hong Kong, Hong Kong, 2024

Bachelor of Digital Media Technology, University of Electronic Science and Technology of China, China, 2020

Academic Appointments

Assistant Professor of Computer Science, School of Computing and Information Systems, SMU, Jan 2025 - Present

Awards and Honors

ISSRE Distinguished Reviewer Award, 2024
IEEE Open Software Services Award, 2022
Nomination of Best Teaching Assistant Award, CUHK, 2022
CUHK Postgraduate Studentship, 2020-2024

RESEARCH

Research Interests

Software Engineering, Artificial Intelligence, Reliability Engineering

Publications

Journal Articles [Refereed]

Exploring the Effectiveness of LLMs in Automated Logging Statement Generation: An Empirical Study, by Yichen Li*, Yintong Huo*, Zhihan Jiang, Renyi Zhong, Pinjia He, Yuxin Su, Lionel C. Briand, and Michael R. Lyu. (2024). IEEE Transactions on Software Engineering, pp. (99):1-20.

Conference Proceedings

Face It Yourselves: An LLM-based Two-Stage Strategy to Localize Configuration Errors via Logs, by Shiwen Shan, Yintong Huo, Yuxin Su, Yichen Li, Dan Li, and Zibin Zheng. (2024). Proceedings of the 33rd ACM SIGSOFT International Symposium on Software Testing and Analysis, pp. 13-25.

A Large-scale Evaluation for Log Parsing Techniques: How Far are We?, by Zhihan Jiang, Jinyang Liu, Junjie Huang, Yichen Li, Yintong Huo, Jiazhen Gu, Zhuangbin Chen, Jieming Zhu, and Michael R. Lyu. (2024). Proceedings of the 33rd ACM SIGSOFT International Symposium on Software Testing and Analysis, pp. 223-234.

Domain Knowledge Matters: Improving Prompts with Fix Templates for Repairing Python Type Errors, by Yun Peng, Shuzheng Gao, Cuiyun Gao, Yintong Huo, and Michael R. Lyu. (2024). Proceedings of the 46th IEEE/ACM International Conference on Software Engineering, Article No.: 4, Pages 1-13.

DivLog: Log Parsing with Prompt Enhanced In-Context Learning, by Junjielong Xu, Ruichun Yang, Yintong Huo, Chengyu Zhang, and Pinjia He. (2024). Proceedings of the IEEE/ACM 46th International Conference on Software Engineering, Article No.: 199, Pages 1-12.

Enhancing LLM-based Coding Tools Through Native Integration of IDE-Derived Static Context, by Yichen Li, Yun Peng, Yintong Huo, and Michael R. Lyu. (2024). Proceedings of the 46th IEEE/ACM International Conference on Software Engineering Workshop on Large Language Model for Code, Pages: 70-74.

Go Static: Contextualized Logging Statement Generation, by Yichen Li, Yintong Huo, Renyi Zhong, Zhihan Jiang, Jinyang Liu, Junjie Huang, Jiazhen Gu, Pinjie He, and Michael R. Lyu. (2024). Proceedings of the ACM on Software Engineering, Volume 1, Issue FSE, Article No.: 28, pp. 609-630.

LILAC: Log Parsing using LLMs with Adaptive Parsing Cache, by Zhihan Jiang, Jinyang Liu, Zhuangbin Chen, Yichen Li, Junjie Huang, Yintong Huo, Pinjie He, Jiazhen Gu, and Michael R. Lyu. (2024). Proceedings of the ACM on Software Engineering, Volume 1, Issue FSE, Article No.: 7, pp. 137-160.

SPES: Towards Optimizing Performance-Resource Trade-Off for Serverless Functions, by Cheryl Lee, Zhouruixin Zhu, Tianyi Yang, Yintong Huo, Yuxin Su, Pinjia He, and Michael R Lyu. (2024). Proceedings of the IEEE 40th International Conference on Data Engineering (ICDE), pp. 165-178.

Demystifying and Extracting Fault-indicating Information from Logs for Failure Diagnosis, by Junjie Huang, Zhihan Jiang, Jinyang Liu, Yintong Huo, Jiazhen Gu, Zhuangbin Chen, Cong Feng, Hui Dong, Zengyin Yang, and Michael R Lyu. (2024). To appear in Proceedings of the 35th IEEE International Symposium on Software Reliability Engineering.

SMU Classification: Restricted

KPIRoot: Efficient Monitoring Metric-based Root Cause Localization in Large-scale Cloud Systems, by Wenwei Gu, Xinying Sun, Jinyang Liu, Yintong Huo, Zhuangbin Chen, Jianping Zhang, Jiazhen Gu, Yongqiang Yang and Michael Lyu. (2024). To appear in Proceedings of the 35th IEEE International Symposium on Software Reliability Engineering, 2024.

SemParser: A Semantic Parser for Log Analytics, by Yintong Huo, Yuxin Su, Baitong Li, and Michael R. Lyu. (2023). Proceedings of 44th International Conference on Software Engineering, pp. 881-893, 2023.

AutoLog: A Log Sequence Synthesis Framework for Anomaly Detection, by Yintong Huo*, Yichen Li*, Yuxin Su, Pinjia He, Zifan Xie, and Michael R. Lyu. (2023). Proceedings of 38th IEEE/ACM International Conference on Automated Software Engineering, pp. 497-509.

EvLog: Identifying Anomalous Logs over Software Evolution, by Yintong Huo, Cheryl Lee, Yuxin Su, Shiwen Shan, Jinyang Liu and Michael R. Lyu. (2023). Proceedings of 34th IEEE International Symposium on Software Reliability Engineering, pp. 391-402.

A Roadmap towards Intelligent Operations for Reliable Cloud Computing Systems, by Yintong Huo, Cheryl Lee, Jinyang Liu, Tianyi Yang, and Michael R Lyu. (2023). Proceedings of the IEEE International Conference on Data Mining Workshops.

CIKQA: Learning Commonsense Inference with a Unified Knowledge-in-the-loop QA Paradigm, by Hongming Zhang, Yintong Huo, Yanai Elazar, Yangqiu Song, Yoav Goldberg, and Dan Roth. (2023). EACL Findings.

ARCLIN: Automated API Mention Resolution for Unformatted Texts, by Yintong Huo, Yuxin Su, Hongming Zhang, and Michael R. Lyu. (2022). Proceedings of 44th International Conference on Software Engineering, pp. 138-149, 2022.

Logvm: Variable semantics miner for log messages, by Yintong Huo, Yuxin Su, and Michael Lyu. (2022). IEEE International Symposium on Software Reliability Engineering Workshops (ISSREW).

Learning Contextual Causality Between Daily Events From Time-Consecutive Images, by Hongming Zhang, Yintong Huo, Xinran Zhao, Yangqiu Song, and Dan Roth. (2021). Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition, Commonsense Workshop.

TEACHING

Teaching Areas

Courses Taught

SMU Classification: Restricted

Singapore Management University

Undergraduate Programmes:

Postgraduate Professional Programmes :

EXTERNAL SERVICE - PROFESSIONAL

2025, Program Committee Member: ICSE, ICPE

2024, Program Committee Member: ICPE, ISSRE, FORGE (co-located with ICSE), Internetware (New Idea Track);

Reviewer for CSUR, TSE, TOSEM, STVR

2023, Program Committee Member: AIOPS Workshop (co-located with ICDE); Reviewer for TOSEM, STVR