Shan Shiwen

shanshw@mail2.sysu.edu.cn +86 13728195430
Sun Yat-Sen University, Guangdong, China
shanshw

Education

Sept 2020 – Current **Undergraduate, Sun Yat-Sen University** in Software Engineering.
Junior Student, ranked 3/70. Score: 4.1/5.0 3.9/4.0 91/100. MBTI: enfj-t.

Research Interests

- **Operating Systems**, **Machine Learning**, **Program Analysis**, **Reinforcement Learning**, …

Research Publications

Conference Proceedings

1. S. Shan, Y. Huo, Y. Su, Y. Li, D. Li, and Z. Zheng, "Face it yourselves: An llm-based two-stage strategy to localize configuration errors via logs," in *2024 IEEE 33rd International Symposium on Software Testing and Analysis (ISSTA)*, 2024.
2. Y. Huo, C. Lee, Y. Su, S. Shan, J. Liu, and M. R. Lyu, "Evlog: Identifying anomalous logs over software evolution," in *2023 IEEE 34th International Symposium on Software Reliability Engineering (ISSRE)*, 2023, pp. 391–402. DOI: 10.1109/ISSRE59848.2023.00018.

Research Experiences

Dec. 2021 – Nov. 2022 **Fault Detection of Cloud Native Software Based on Performance Analysis** | College Student Innovation and Entrepreneurship Training Program Provincial level | **Leader** | Rated Excellence | Operating System & Machine Learning
Use instrumentation techniques, Linux embedded eBPF tools, and other methods to monitor the operation of specific processes, and then develop a native system using artificial intelligence technology to locate and detect software faults based on the process information obtained.

Jul. 2022 – Sept. 2022 **Abnormal Log Recognition in Software Evolution** | The Chinese University of Hong Kong | Operating System & Machine Learning
Collect sets of log statements triggered by normal and faulty scenarios of both old and new versions of the Spark and Hadoop systems, and use techniques such as transfer learning to recognize abnormal logs during the software evolution process.

Research Experiences (continued)

Dec. 2022 – Nov. 2023

System Software Log Generation based on Symbolic Execution | College Student Innovation and Entrepreneurship Training Program Provincial level | **Leader** | In Progress | Operating System & Program Analysis
Based on static analysis technology, the system's log generation path can be obtained from the source code, and symbolic execution technology can be used to filter out non-existent paths to automatically generate a dataset of system software logs.

Jun. 2023 – Aug. 2023

Automatic Generation of System Logs Based on Static Analysis and Fuzz Testing Technology | The Chinese University of Hong Kong Summer Research Placement Programme for Mainland and Taiwan Students | to be launched | Operating System & Fuzzing
Use static analysis technology to identify and construct the system's log generation path from the source code level, and then use fuzzy testing technology to exclude non-real paths to generate a more diverse log dataset that is closer to different application scenarios.

Skills

Languages — **CET-4: 639, CET-6: 603.**

Coding — C/C++, Python, RUST, Java, LINUX, LaTeX, DOCKER, Git …

Misc. — Academic reading, LaTeX typesetting, Long-distance Running.

Miscellaneous Experience

Honour

2023 — **The First Prize of Scholarship**, Sun Yat-sen University.

One Star Volunteer, Sun Yat-sen University.

2021 - 2022 — **Outstanding Communist Youth League Member**, Sun Yat-sen University.

2021 & 2023 — **Exemplary Individual in Work-Study**, Sun Yat-sen University.

2020 & 2021 — **The Second Prize of Scholarship**, Sun Yat-sen University.

Awards and Achievements

2023 — **Finalist**, Mathematical Contest In Modeling, COMAP.

Extracurricular Activities

2020 – Current — **Student Assistant**. Network and Information Center of Sun Yat-sen University.

2023 — **Teaching Assistant**. *Principles of Operating Systems*, School of Software Engineering, Sun Yat-sen University.

2021-2022 — **Student Affair**. Communist Youth League Sun Yat-sen University Committee.

2022 — **Excellent Accompanying Tutor**. The 13th Mei-Li-Zhong-Guo Accompanying Reading Project.