

Zhijie Liu

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Personal Profile

Energetic, creative, and responsible student, currently studying at ShanghaiTech University in a graduate program. Passionate about software engineering, having two or more years of expertise, and specializing in Android malware detection, fuzz testing, LLMs, and so on.

Education

ShanghaiTech University

Master of Science in Computer Science, GPA: 3.89/4.0

- Courses:** Program Analysis, Algorithm Design, Machine Learning, Cybersecurity

Pudong, Shanghai

September 2022 - Current

Chang'an University

Bachelor of Science in Computer Science, GPA: 4.20/5.0 (ranking 1th)

- Courses:** Compiler, Networking, Operating System, Database, Computer Architecture

Xi'an, Shaanxi

August 2018 - July 2022

Publications

CONFERENCE PROCEEDINGS

Enhancing Malware Detection for Android Apps: Detecting Fine-granularity Malicious Components

Z. Liu, L. Zhang, Y. Tang

2023 38th IEEE/ACM International Conference on Automated Software Engineering (ASE), 2023

PREPRINT ARTICLES

ChatGPT vs SBST: A Comparative Assessment of Unit Test Suite Generation

Yutian Tang, Zhijie Liu, Zhichao Zhou, Xiapu Luo

arXiv preprint arXiv:2307.00588 (2023). 2023

Experience

ShanghaiTech University, CATLab

Project: Android Malicious Component Detection

- Summarized the shortcomings of existing Android malware detection systems.
- Designed a new approach based on deep learning and genetic algorithm for detecting Android malicious components adaptively.
- Improved the performance and robustness of Android malware detection by up to 10% and 20%, respectively.
- Supported fine-granularity Android malicious component detection.

Pudong, Shanghai

January 2022 - Current

Skills

Programming C/C++ (Windows and Linux), Java, Python (PyTorch, NumPy, Scikit-learn, etc.), Assembly, Structured Query Language, Cypher.

Research Android Malware Detection, Large Language Model, Fuzz Testing, Program Analysis, Genetic Algorithm.

Miscellaneous Windows, Linux, Bash Shell, JetBrains, \LaTeX (Overleaf), Microsoft Office, Git, IDA Pro, Matlab.

Services

2023 **Program Committee**, International Conference on Software Engineering & Knowledge Engineering (SEKE)

USA

Awards

2022 **Outstanding Thesis Award**, Undergraduate Research Scholars, Chang'an University

China

2022 **Outstanding Graduate Award**, Undergraduate Scholarships, Chang'an University

China

2022 **The Second Class Prize Winner**, ASC22 Student Supercomputer Challenge

China

2021 **National Scholarship**, Undergraduate Scholarships, Chang'an University

China

2021 **Meritorious Winner**, 2021 Interdisciplinary Contest in Modeling

USA

2020 **National Scholarship**, Undergraduate Scholarships, Chang'an University

China

2019 **Second Prize of Zhaoshang-Road Scholarship**, Undergraduate Scholarships, Chang'an University

China