Qiping Wei

PhD Candidate

Profile

A dedicated, principled, and hard-working researcher with a strong passion for exploring machine learning techniques and large language models (LLMs) to address complex engineering challenges.

Publications

Jul. 2024
Sligpt: A Large Language Model-Based Approach for Data Dependency Analysis on Solidity Smart Contracts (Journal: **Software**)

Jun. 2024
A Coverage-Driven Approach to Symbolic Execution of Smart Contracts (Journal: **DLT**)

Oct. 2023
SmartExecutor: Coverage-Driven Symbolic Execution Guided by a Function Dependency Graph (**BRAINS 2023**)(awarded as one of the best papers)

Apr. 2023
MagicMirror: Towards High-Coverage Fuzzing of Smart Contracts (**ICST 2023**) (co-author)

Education

present
↑
2020
Ph.D., Computer Science
University of Texas at Arlington (UTA)
Arlington, TX, USA

Awarded in 2019
M.S., Computer Engineering
University of Texas at Arlington (UTA)
Arlington, TX, USA

Awarded in 2015
B.S., Computer Science and Technology
Huazhong University of Science and Technology (HUST)
Wuhan, Hubei, China

Teaching Experience

2019
↑
2018
Teaching Assistant
Computer Networks **or**
Advanced topic in Computer Networks

present
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2020
Teaching Assistant
Software Testing and Maintenance **or**
Advanced topic in Software Engineering

Mentor
Martha Taffa (Summer 2020)
Ameen Mahouch (Fall 2023)
Matthew Moran (Spring 2024)

Projects

- Enhance the symbolic execution of smart contracts with LLMs (**active**).
- Apply deep reinforcement learning to generate function sequences (**active**).
- Leverage LLMs to do data dependency analysis.
- Employ a graph structure and state significance analysis to guide the symbolic execution of Solidity smart contracts.

Work Experience

Office Assistant (part-time)
Distance Learning and Continuing Education Branch of National Research Association of Computer Education in Colleges and Universities of China

Wuhan, China (2011-2016)

Services

- Editor for the Journal of Computer Technology and Education (in Chinese) (2020-present)
- Judge for Innovation Day (April 2023 & April 2024)

Awards

Awarded as one of the best teaching assistants in 2024.

Contact

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