Ruiqi Wang

: black_alice707@sjtu.edu.cn : (+86) 151-5687-3847
: 800 Dongchuan RD. Minhang District, Shanghai, China (200240) : https://github.com/reachal0206

Education

Shanghai Jiao Tong University (SJTU), Shanghai, China Sep. 2020 – Present

Bachelor student in Information Security (IEEE Honor Class), expected June 2024.

- **GPA: 3.95/4.30 (1/32)**
- **Toefl: 107**
- **Correlated Curriculums:** Linear Algebra(98), Abstract Algebra(95), Digital Electronic(98), Data Structure(96), Artificial Intelligence(97), Hardware Security(99), Information Security Integrated Practice(97), Modern Cryptography(98), Theory and Application of Content Security(95)

Honors and Awards

National Scholarship *top 1%* Sep. 2023
SJTU Merit Student *top 5%* Sep. 2023
SJTU Outstanding League Cadres *top 1%* May. 2023
SJTU Academic B Scholarship *top 5%* Dec. 2022
SJTU Ruiyuan - Sequoia Talent Development Fund *top 2%* Dec. 2022
SJTU Excellent Student Cadres *top 1%* Oct. 2022
1st Prize, **Award on National College Student Information Security Contest** Aug. 2022
SJTU Outstanding League Cadres *top 1%* May. 2022
National Scholarship *top 1%* Dec. 2021
SJTU Academic B Scholarship *top 5%* Oct. 2021
SJTU Merit Student *top 5%* Oct. 2021

Research Experience

Causal Evaluation of Language Models Shanghai AI Laboratory June. 2023 – Oct. 2023

Research Internship Core Team Member

- Evaluated causal reasoning ability of mainstream large language models, covering 32+ models.
- Compared the effect of mainstream prompts on large language models, covering 25 tasks or scenarios.
- A benchmarking paper in submission to JMLR.

Image-based Malware Homology Analysis LoCCS Lab, SJTU Oct. 2022 – June. 2023

Cooperation project with TOPSEC Individual Project

- Developed novel ways utlizing byte-level and opcode-level features to build standard-sized RGB malimgs.
- Image generation time reduced by 50% compared with the traditional byteplot method.
- Malware detection accuracy improved by more than 20% compared with grayscale image-based methods.
- Submitted two patent applications.
- Discovered that graph-based detection methods are more robust and future research on it is expected.

Monolithic kernel development in RISC-V architecture IPADS, SJTU Mar. 2023 – Jun. 2023

Research Internship Student Leader

- Analyzed RISC-V based open source operating system development projects like xv6-riscv, rCore, uCore.
- Gained insights into the structural features and design principles of the monolithic kernel.
- Used CodeLLM to accelerate kernel development.

Wireless Side Channel Attack for Bluetooth Devices LoCCS Lab, SJTU Apr. 2022 – Aug. 2022

Work for National College Student Information Security Contest Core Team Member

- Realized a wireless side channel analysis system towards AES encrypted Bluetooth chips based on repeater.
- Recover the AES encryption key within 0.3m in a natural noise environment.
- Effectively reduced the encryption key space at a distance of 1m, greatly exceeded the traditional method.
- Won *1st Prize* in the 15th National College Students Information Security Contest.

Fault Injection Attacks against TEE LoCCS Lab, SJTU Jun. 2022 – Sep. 2022

Summer Research Internship

- Be familiar with TEEs like Intel SGX, ARM TrustZone and AMD SEV.
- Understood the basics of fault injection attack.
- Be familiar with typical fault injection attack cases in TEEs.

Deep Learning for 3D Point Clouds MVIG Lab, SJTU Dec. 2021 – Sep. 2022

Laboratory Research Internships

- Be familiar with 3D point cloud tasks, including classification, object detection and tracking.
- Participated in building a point cloud dataset of multi-component rigid body objects.
- Improved a category-Level 9D pose estimation method(CPPF) by introducing a voting mechanism.

Work Experience

Key Management Services Development on Intel SGX Intel-Shanghai Aug. 2023 – Present

Internship ehsm: https://github.com/intel/ehsm

- ehsm-kms deployment with k8s cluster.
- Support integration with some internal projects. (To be completed)
- Support new cryptography apis like SM9. (To be completed)
- Support customer master key rotation. (To be completed)

Skills

- Programming Languages: Basic Python and C++, be familiar with Pytorch.
- Development: Basic Web and Android.
- Languages: English - fluent, Toefl 107(S 24) and Mandarin - Native.
- Security Skills: Basic static analysis and reversing.