# Liangqin Ren

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# EDUCATION

University of Kansas

Ph.D. in Computer Science, advised by Professor Fengjun Li and Bo Luo

University of Chinese Academy of Sciences

Aug 2021 – Jul 2026 (Expected)

Aug 2017 – Jul 2020

M.Eng. in Computer Technology

Shandong University of Science and Technology

Aug 2013 – Jul 2017

B.Eng. in Network Engineering

# Publications

- Liangqin Ren, Zeyan Liu, Fengjun Li, Kaitai Liang, Zhu Li, and Bo Luo. PrivDNN: A Secure Multi-Party Computation Framework for Deep Learning using Partial DNN Encryption. In the 24th Privacy Enhancing Technologies Symposium (PETS), Bristol, UK, 2024.
- X. Xu, Q. Cai, J. Lin, S. Pan and L. Ren. Enforcing Access Control in Distributed Version Control Systems. 2019 IEEE International Conference on Multimedia and Expo (ICME), Shanghai, China, 2019.
- Liangqin Ren, Wei Wang, Qiongxiao Wang, Linli Lu. A New Cloud Cryptographic Computing Platform Architecture and Implementation[J]. Netinfo Security, 2019, 19(9): 91-95.

## SERVICES

External Reviewer: International Conference on Distributed Computing Systems (ICDCS)

External Reviewer: International Conference on Dependable Systems and Networks (DSN)

Moderator: International Conference on Security and Privacy in Communication Networks (SecureComm)

2024

# PROJECT EXPERIENCE

#### Secure Multi-Party Computing Framework with Partial Homomorphic Encryption

Jan 2022 - Feb 2024

- Implemented four schemes for core neuron selection on five datasets.
- Implemented frameworks protecting models with homomorphic encryption based on core neuron selection.
- Demonstrated protection robustness against malicious clients and servers.

#### Protect Portrait Privacy against DeepFake

Feb 2024 – Present

- Designed the GAN-based protection generator against DeepFake.
- Improved protection generator model with neural architecture search.
- Demonstrated protection robustness against three kinds of DeepFake attacks.

#### Create and Detect Images Generated by AIGC

Oct 2023 – Present

• Implemented scripts to generate AIGC pictures in five fields.

#### EMPLOYMENT HISTORY

### University of Kansas, Graduate Teaching Assistant

Spring & Fall, 2022 - 2024

• Taught labs, guided projects, and grade for EECS 348 (448) Software Engineering.

University of Kansas, Graduate Research AssistantWorked on projects about machine learning security.

Summer, 2021 - 2023

Baidu Corporation, Software Development Intern

• Developed Baidu translation software development kits for mobile devices.

Jan - May, 2021

• Developed cross-compilation framework between X86 and embedding platforms.

# Honors and rewards

#### **CANSec Travel Grant Award**

2022

Honors Graduate (Rank 1/48), Shandong University of Science and Technology

2017

# SKILLS

**Languages:** C/C++, Python **Frameworks:** PyTorch