JINGWEN WU

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EDUCATION

B.S. in Computer Science and Technology — **Beijing University of Posts and Telecommunications**
- Supervisor: Dr. Yu Wen — 2016 - 2020

M.S. in Information Technology **(Thesis-based)** — **The Hong Kong Polytechnic University**
- Supervisor: Dr. Huang Xiao — 2022 - 2024

Ph.D. Student in Computer Science — **Hong Kong Baptist University**
- Supervisor: Dr. Dai Hongning — 2024 - 2028

PUBLICATIONS

Security and Reliability of VR/AR Systems

- Wu Jingwen, Guo Hanyang, Dai Hong-Ning, Luo Xiapu. (2026). XRFix: Exploring Performance Bug Repair of Extended Reality Applications with Large Language Models. *IEEE/ACM International Conference on Software Engineering (ICSE).*

AI Security

- Lai, Y., Waniek, M., Li, L., Wu, J., Zhu, Y., Michalak, T. P., ... & Zhou, K. (2024). Coupled-Space Attacks Against Random-Walk-based Anomaly Detection. *IEEE Transactions on Information Forensics and Security*.

RESEARCH EXPERIENCE

XRFix: Exploring Bug Repair of Extended Reality Applications with Large Language Models, Hong Kong Baptist University — 05/2024-09/2024

- Construct an XR open-source codebase and a tailored dataset during the entire development life cycle of XR apps.
- Customize two static analyzers to effectively detect Unity-related bugs.
- Design prompt templates to instruct LLMs to fix bugs with different complexity levels.
- Conduct extensive experiments to evaluate LLMs in bug-fixing tasks.

Knowledge graph embeddings with LLM, **Master's graduate thesis**, supervised by Prof. Huang Xiao, The Hong Kong Polytechnic University — 01/2023 - 01/2024

- Fine-tuned Llama to apply to knowledge graph embeddings. Designed framework and experimented on benchmark datasets to combine the structural embeddings with semantic embeddings.
- Adopted link prediction to do the downstream evaluation of our models.

Dual-Space Attacks against Random-Walk-based Anomaly Detection, StilLab, The Hong Kong Polytechnic University — 03/2023 - 09/2023

- Proposed that if an attacker could reduce the anomaly scores of target nodes below a certain threshold, then we say it has escaped from the anomaly detection.
- Designed 2 ways to perform graph-space attack: alterI-attack/cf-attack. Utilized graph attack to guide feature attack.

EMPLOYMENT

Part-time RA, STiLLAB, PolyU — 03/2023 - 09/2023

- Supervisor: Dr. Zhou Kai

Test Engineer, Search and Recommend dpt., Jing Dong, Beijing, China — 07/2020 - 03/2022