Liu Wang

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RESEARCH INTERESTS

My research interests lie at the intersection of privacy, security, and software engineering. My work mainly focuses on mobile app analysis, particularly, developing approaches to address the increasing security and privacy concerns within mobile app ecosystems, as well as mining and modeling app data to promote best operational practices across app markets. I am currently working on usable mobile privacy and security research.

EDUCATION

Beijing University of Posts and Telecommunications (BUPT)   **Beijing, China**

Ph.D. in School of Computer Science (National Pilot Software Engineering School)   *2022 - present*
- Supervisor: Prof. Yi Wang

M.E. in School of Computer Science (National Pilot Software Engineering School)   *2019 - 2022*
- Supervisor: Prof. Haoyu Wang

Shandong University (SDU)   **Jinan, Shandong, China**

B.E. in Digital Media Technology, School of Software Engineering   *2015 - 2019*

PUBLICATIONS (*co-first authorship)

1 **Global Prosperity or Local Monopoly? Understanding the Geography of App Popularity**
Liu Wang, Conghui Zheng, Haoyu Wang, Xiapu Luo, Gareth Tyson, Yi Wang, Shangguang Wang
21st International Conference on Mining Software Repositories (MSR), 2024.

2 **MalCertain: Enhancing Deep Neural Network Based Android Malware Detection by Tackling Prediction Uncertainty**
Haodong Li, Guosheng Xu, Liu Wang, Xusheng Xiao, Xiapu Luo, Guoai Xu, Haoyu Wang
Proceedings of 44th International Conference on Software Engineering (ICSE), 2024.

3 **Re-measuring the Label Dynamics of Online Anti-Malware Engines from Millions of Samples**
Jingjing Wang*, Liu Wang*, Feng Dong, Haoyu Wang
ACM Internet Measurement Conference (IMC), 2023.

4 **WeMinT: Tainting Sensitive Data Leaks in WeChat Mini-Programs**
Shi Meng*, Liu Wang*, Shenao Wang, Kailong Wang, Xusheng Xiao, Guangdong Bai, Haoyu Wang
The 38th IEEE/ACM International Conference on Automated Software Engineering (ASE), 2023.

5 **Ransomware as a Service: Demystifying Android Ransomware Generators**
Can Tu, Liu Wang, Yang Xu, Yiping Zhao, Haitao Xu, Haoyu Wang
19th EAI International Conference on Security and Privacy in Communication Networks (SecureComm), 2023.

6 **DISTDET: A Cost-Effective Distributed Cyber Threat Detection System**
Feng Dong, Liu Wang, Nie Xu, Fei Shao, Haoyu Wang, Ding Li, Xiapu Luo, Xusheng Xiao
The 32th USENIX Security Symposium (USENIX Security), 2023.

7 **A Deep Dive into the Featured iOS Apps**
Liu Wang, Haoyu Wang, Huiyi Wang, Li Li, Yi Wang
The 14th Asia-Pacific Symposium on Internetware (Internetware), 2023.

8 **MalWhiteout: Reducing Label Errors in Android Malware Detection**
Liu Wang, Haoyu Wang, Xiapu Luo, Yulei Sui
The 37th IEEE/ACM International Conference on Automated Software Engineering (ASE), 2022.

9 **Privacy Analysis of Period Tracking Mobile Apps in the Post-Roe v. Wade Era**
Zikan Dong, Liu Wang, Hao Xie, Guoai Xu, Haoyu Wang
A-Mobile Workshop, co-located with ASE'22 (A-Mobile), 2022.

10 **What Did You Pack in My App? A Systematic Analysis of Commercial Android Packers**
Zikan Dong*, Hongxuan Liu*, Liu Wang, Xiapu Luo, Yao Guo, Guoai Xu, Xusheng Xiao, Haoyu Wang
ESEC/FSE, Industry Track, 2022.

11 **Demystifying "Removed Reviews" in iOS App Store**
Liu Wang, Haoyu Wang, Xiapu Luo, Tao Zhang, Shangguang Wang, Xuanzhe Liu
ESEC/FSE, Industry Track, 2022.

12. **MalRadar: Demystifying Android Malware in the New Era**
Liu Wang, Haoyu Wang, Ren He, Ran Tao, Guozhu Meng, Xiapu Luo, Xuanzhe Liu
ACM SIGMETRICS/Performance (SIGMETRICS), 2022.

13. **A Tale of Two Countries: A Longitudinal Cross-Country Study of Mobile Users' Reactions to the COVID-19 Pandemic Through the Lens of App Popularity**
Liu Wang, Haoyu Wang, Yi Wang, Gareth Tyson, Fei Lyu
The 9th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MobileSoft), 2022.

14. **A Longitudinal Study of Removed Apps in iOS App Store**
Fuqi Lin*, Haoyu Wang*, Liu Wang, Xuanzhe Liu.
Proceedings of the 30th The Web Conference (WWW), 2021.

15. **Beyond the Virus: A First Look at Coronavirus-themed Android Malware**
Liu Wang, Ren He, Haoyu Wang, Pengcheng Xia, Yuanchun Li, Lei Wu, Yajin Zhou, Xiapu Luo, Yulei Sui, Yao Guo, Guoai Xu
Empirical Software Engineering (EMSE)

16. **A Large-Scale Empirical Study of COVID-19 Themed GitHub Repositories**
Liu Wang, Ruiqing Li, Jiaxin Zhu, Guangdong Bai, Haoyu Wang
IEEE Computer Society Signature Conference on Computers, Software and Applications (COMPSAC), 2021.

17. **Understanding the Impact of COVID-19 on Github Developers: A Preliminary Study**
Liu Wang, Ruiqing Li, Jiaxin Zhu, Guangdong Bai, Weihang Su, Haoyu Wang
The 33rd International Conference on Software Engineering & Knowledge Engineering (SEKE), 2021.

18. **MadDroid: Characterising and Detecting Devious Ad Content for Android Apps**
Tianming Liu, Haoyu Wang, Li Li, Xiapu Luo, Feng Dong, Yao Guo, Liu Wang, Tegawende F. Bissyande, Jacques Klein.
Proceedings of The Web Conference (WWW), 2020.

19. **Market-level Analysis of Government-backed COVID-19 Contact Tracing Apps**
Huiyi Wang*, Liu Wang*, Haoyu Wang.
The International Workshop on Advances in Mobile App Analysis (A-Mobile), 2020.

HONORS AND AWARDS

- National Scholarship, Chinese Ministry of Education   2021, 2023
- Outstanding Graduate Student, BUPT   2021, 2022, 2023

SERVICES

TPC Member	A-Mobile 2023
PC Member	ChinaSoft 2023
Reviewer	WWW 2024, EAI SecureComm 2023, Journal of Software (Chinese)
Sub-reviewer	PoPETs 2024, FSE 2024

TEACHING EXPERIENCE

- Teaching Assistant, Software Architecture, BUPT   Spring 2024
- Teaching Assistant, Principles of Computer Organization, BUPT   Spring 2020, Spring 2021

VISITINGS AND INTERNS

- Visiting PhD student at the *Security Pride* research group in Huazhong University of Science and Technology (HUST), working with *Prof. Haoyu Wang*.   Mar 2023 - Aug 2023
- Internship at *Sangfor Technologies*.   Oct 2021 - Feb 2022