Xin LIU

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RESEARCH INTERESTS

cyber forensics (i.e., recovering cyber forensic evidence from data/programs), data privacy (i.e., differential privacy), and software engineering (software testing and reverse-engineering)

EDUCATION

Huazhong University of Science and Technology (985) — **Wuhan Hubei, China**
B.E. in Electronic and Information Engineering — **Sep 2016—July 2020**
- Cumulative GPA: 3.72/4 Grade Rank: Top 20% TOEFL: 99 (R27/L25/S23/W24) GRE: 147/169/3

University of Virginia — **Charlottesville VA, USA**
Ph.D. student in Computer Science — **Sep 2020—Sep 2021**
- Advisor: Yonghwi Kwon Topic: Python decompiler and Webassembly pass optimization

PUBLICATIONS

[1] Xin Liu, Pan Zhou, Tie Qiu, Dapeng Oliver Wu. "Blockchain-Enabled Contextual Online Learning under Local Differential Privacy for Coronary Heart Disease Diagnosis in Mobile Edge Computing." *IEEE Journal of Biomedical and Health Informatics (JBHI'20)*, 2020. [PDF]

EXPERIENCE

Decompile and Transform Python Bytecode — **University of Virginia in Prof. Kwon's Group**
Research Assistant — **Sep 2020—Sep 2021**
- Analyzed Python bytecodes to observe malicious codes with decompile tools, like uncompile6 and decompile3
- Used logical breakdowns and decompile rules to transform bytecodes that failed to be decompiled as Python codes

Privacy-preserving Online Recommendation — **Signal Processing and Information Networking Lab**
Research Assistant — **Sep 2017—May 2020**
- Proposed efficient machine learning algorithms, and utilized privacy-preserving mechanisms to handle the issues of content recommendation, disease diagnosis, the privacy of personal information and task allocation in edge computing
- Identified on contextual bandit problems and devised an adaptive system model supporting big data analysis
- Published one paper and finished three papers

IoT Project in Smart Home--Intelligent Mirror — **National University of Singapore in School of Computing**
Leader (Funded by the school, 10k RMB) — **July 2018—Aug 2018**
- Utilized computer display screen, and Raspberry pie to build an interactive mirror system in a five-person group.
- Designed adaptive machine learning algorithms to achieve: Identifying different facial pictures, communicating between the hardware (Raspberry pie) and computer to analyze facial details, and recommending personal healthy advice with online learning algorithms.
- Awarded the Outstanding student in the 2018 National University of Singapore Summer Camp. (6/30)

HONORS

National encouragement scholarship (10%)	Aug 2019
Science and technology innovation scholarship (10%)	Aug 2019
Social welfare scholarship (only one in a class)	Sep 2018
Excellent volunteer certificate (over 150 working hours)	Aug 2018
Excellent class cadre scholarship (only one in a class)	Aug 2018