

Tianwei Liu

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Education

University of Southern California

2021-

Master of Computer Science Overall GPA: **3.64/4.0** Advanced GPA: **3.86/4.0**

Wuhan University

2014-2018

Bachelor of Engineering in Information Security Overall GPA: **3.64/4.0** Advanced GPA: **3.86/4.0**

Professional Summary

- Extensive knowledge, including programming, software development, and penetration test
- Solid background in mathematics, analysis, and problem-solving
- Well organized; confident, fast learner; self-motivated; open-minded

Research Experience

Research on GPS timing security

2018

- Achieved a gradual spoofing of single deviation less than 100ms through getting the real-time GPS signal and automatically sending the fake signal via HackRF
- Successfully induced the target devices of substation to deviate from correct time
- Proposed defence plans of detecting the signal's quality, pattern and content

WLAN vulnerability assessment and protection system

2016

- Developed plug-ins to scan vulnerabilities of wireless network through detecting and analyzing the management and control frames, such as WEP, WPS, weak password and Deauth attack
- Proposed the development plan of new plug-in according to the up-to-date CVE

Project & Competition

Project for Network Security

2017

- Attacked the online bank through the MITM, fake DNS server and phishing website
- Successfully got user's sensitive information including account's password

Project for Introduction to Information Systems Security

2016

- Cracked the password of RFID cards, and verified the structure of raw data
- Successfully changed the amount of card to any value

"Citi Cup" Financial Innovation Application Competition

2016

- Implemented a financial decision making algorithm, discovering market rules via self-learning neural network using Python and TensorFlow
- Achieved the highest monthly interest rate of 50% with the real data of ten stocks

Honors & Awards

- Outstanding employee Award 2019
- Memorial Scholarship of National Network Security Talent and Innovation Base 2018
- Outstanding Academic Scholarship 2017
- Third prize in Hubei Division of the National College Students Financial Challenge 2017
- School Project of Innovation and Entrepreneurship Training 2016
- Outstanding Academic Scholarship 2016

Core Skills

Language: C, C++, Python, Java, MySQL and Shell
Security: MITM, RFID, BadUSB, GPS etc

System: Linux and Android system,
Framework: TensorFlow, Django