

YUQING YANG

September 13, 2020

Research Assistant
Department of Computer Science and Engineering
The Ohio State University

yang.5656@osu.edu
<https://frostwing98.com>

EDUCATION

Nanjing University, Nanjing, China 2016.9 - 2020.6
Bachelor of Engineering in Software Engineering GPA: 4.40/5.0
Thesis: Metric Learning Based Continuous User Authentication Framework Prof. Fengyuan Xu

RESEARCH INTEREST

mobile and embedded system security
software security, program analysis

ACADEMIC EXPERIENCE

Research: Information Retrieval and Mapping on Code Issue 2018.9 - 2020.3
Research Assistant *Advisor: Asst. Prof. Hongyu Kuang*

- This project utilizes the issues raised on Github as user-generated contents, and multiple factors such as assignees and issue-links to guide the clustering and classification. By doing so, we hope to obtain major topics of these issues within certain periods of time, therefore augment the further developments. In this project, I pushed this project forward by proposing a new way to utilize the issue link and micro-manage the clusters generated by topic model.

Research: Mobile DL Model Security 2018.10 - 2020.1
Research Assistant *Advisor: Prof. Fengyuan Xu*

- This project makes an attempt to develop an approach to identify, slice, and re-package the DL-related libraries and DL models in mobile apps to bypass obfuscations of the models and reuse them. We are trying to involve domain knowledges to help identifying related functions in the .so libraries and java code. Also, we are trying to define a new program model to perform a static analysis on the Android applications with complex lifecycles.
In this project, I worked with PhD student Hao Wu and proved the feasibility of the project by successfully wrapping apks, and worked out the initial pipeline trying to manually reuse the model. Then I wrote automatic scripts to bypass google play and obtain the apks, and try to automatically identify and extract the DL-related function information in the .so library.

Research: Hunting Hidden Webcam Using Wifi Signal Fingerprints 2019.9 - 2020.1
Research Assistant *Advisor: Assoc. Prof. Jingyu Hua*

- Nowadays as cameras are becoming smaller and smarter, more and more portable tiny cameras are produced. When deployed in some places such as hotels, one can easily set up a hidden camera filming the behaviors of people inside. Trying to fight with such hidden cameras, we seek to develop a practical way to detect the signal strength change when moving inside or outside the rooms, trying to identify, track, and locate the dubious signal source that may be sneakily filming and uploading your privacy
In this project, I have expanded the original project developed in the course, and have been cooperating with PhD student Ying He, trying to make preliminary observations and experiments collecting and analyzing data from different scenes.

Course: Network Attack and Defense Experiment 2019 2019.9 - 2020.1
Teaching Assistant *Lecturer: Jian Chen*

- As a TA, I am to deliver two lectures introducing the CTF contests, and to organize the 3rd Nanjing University TrinityCTF cybersecurity contest.

Course: Computer Network(Internet Based Computing) 2019

2019.3 - 2019.7

Teaching Assistant

Lecturer: Feng Liu

- I am the author of the new experiment guide. I worked with other graduate student TAs to provide Q&A during experiment.

Course: Network Attack and Defense Experiment 2018

2018.9 - 2019.1

Teaching Assistant

Lecturer: Jian Chen

- As a TA, I delivered two lectures introducing the CTF contests, and organized the 2nd Nanjing University TrinityCTF cybersecurity contest.

HONORS & SCHOLARSHIPS

Outstanding Graduate Student of Nanjing University

2020

Outstanding Student of Nanjing University

2019, 2018, 2017

Renmin Scholarship (People's Scholarship)

2019, 2018, 2017

Zhenggang Elite Scholarship

2017

INVITED TALKS

Topics in Information Security, 2020 Spring

2020.4-2020.6

Invited Lecture

Computer Network

- Invited 6-episode video-based lectures on security
- <https://www.bilibili.com/video/BV1eK4y1r71R>

MISC fundamentals in CTF, 2019 Fall

2020.1

Invited Lecture

Network Attack & Defense

- Invited lecture for Network Attack & Defense course.
- https://github.com/frostwing98/Invitedtalks/blob/master/CyberSecurity/Invitedtalk_MISC_in_CTF.pdf

Information security frontiers

2018.12.22

SWI Peer Seminar

Software Institute

- Invited talk for Software Institute Peer Seminar.
- https://github.com/frostwing98/Invitedtalks/blob/master/CyberSecurity/Invitedtalk_information_security.pdf

MISC fundamentals in CTF, 2018 Fall

2018.12.10

Invited Lecture

Network Attack & Defense

- Invited lecture for Network Attack & Defense course.
- https://github.com/frostwing98/Invitedtalks/blob/master/CyberSecurity/Invitedtalk_MISC_in_CTF.pdf

Classic Cryptography and Encodings in CTF

2018.12.08

SWI Peer Seminar

Software Institute

- Invited talk for Software Institute Peer Seminar.