

# Jian-Fong Yu

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## Education

### University of Illinois Urbana-Champaign

MASTER OF COMPUTER SCIENCE

- Coursework: Advanced Computer Networks, Computer Security I

*Champaign, Illinois, USA*

*Aug. 2024 - Present*

### National Yang Ming Chiao Tung University

SENIOR YEAR OF B.S. IN COMPUTER SCIENCE

- Overall GPA: 4.0 / 4.0 (4.27 / 4.3) (Ranked 1st out of 185 students in the department)
- Honor Student (3 / 6 semesters)
- Course Award of Intro. to Algorithm, Computer Organization, Intro. to Operating System
- Coursework: Intro. to Computer Networks, Intro. to Network Programming, Intro. to Cryptography, Cryptography Engineering, Computer Security Capstone

*Hsinchu, Taiwan*

*Sep. 2021 - Present*

## Experience

### Wireless Internet Research and Engineering Laboratory

UNDERGRADUATE RESEARCH ASSISTANT

- Integrated 5G and MQTT for enhanced IoT connectivity and real-time monitoring in digital twin technology.
- Utilized Python scripts in NVIDIA Isaac Sim and ROS JetArm to simulate and control digital twins for accurate real-time representation and feedback.

*Hsinchu, Taiwan*

*Sep. 2023 - June. 2024*

### Computer Science Student Association in NYCU

PUBLIC RELATIONS TEAM MEMBER

- Wrote articles to advocate fundamental knowledge within the field of computer science. **M** Medium
- Organized a Christmas dance party and a Computer Science Night, seeking sponsorship from businesses.

*Hsinchu, Taiwan*

*May 2022 - Jul. 2023*

## Projects

### Man in the Middle and Pharming Attacks

COMPUTER SECURITY CAPSTONE PROJECT2

- Implemented ARP spoofing, MITM, and pharming attacks in C++ to explore network security vulnerabilities.
- Developed tools to intercept HTTP traffic and extract credentials, demonstrating MITM attacks.
- Engineered pharming attacks to redirect DNS queries and reroute users to malicious websites.

*May 2024*

### IPsec Hijacking

COMPUTER SECURITY CAPSTONE PROJECT1

- Developed a C++ application to hijack IPsec transport mode sessions in Docker containers, using real-time monitoring and packet crafting.
- Utilized Wireshark for detailed packet capture and analysis, validating the effectiveness of the hijacking process.

*Apr. 2024*

### Network Chat Server

INTRODUCTION TO NETWORK PROGRAMMING - HOMEWORK 2

- Developed a C++ chat server for handling multiple clients, supporting user authentication and real-time messaging across up to 100 chat rooms.
- Implemented features like user status management, message pinning, history tracking, and keyword filtering.

*Dec. 2023 - Jan. 2024*

### DNA Encryption

CRYPTOGRAPHY ENGINEERING COURSE PROJECT

- Developed a Python program capable of encrypting text or images into DNA sequences and decrypting them.
- Implemented Adaptive Huffman encoding for file compression and utilized LFSR to generate a one-time pad (OTP) for file encryption.

*May 2023*

## Certificates

**TOEFL iBT** Total: 103 / Reading: 29 / Listening: 27 / Speaking: 21 / Writing: 26

## Skills

**Programming Languages** C/C++, Python, JavaScript

**Tools & Technologies** Docker, Wireshark, Linux, Git