



## Tsao, YunWei

Born in Taoyuan City in 1990, worked as a Software Engineer for 8 years.

### In college:

Graduated from Yuan Ze University, majoring in Information management. During this period, I have completed the following courses:

System Analysis, Data Structure, Introduction to Computers, Operating System.

### Work experience:

**2013/10~2016/4**

Hainan Jinhai Pulp&Paper - Software Engineer

Job description:

Develop and Migrate the application from desktop to both mobile platform Android and IOS

Project & Technique:

Project :

Monitor and control web camera on mobile phone

Technique:

QT framework, C++, Javascript, FFMPEG, Darwin Streaming Server, RTSP, ONVIF, Multi-Thread

Project:

Monitor equipment and production information on mobile phone

Technique:

OPC Server, Web Service, SOAP, Multi-Thread

Project:

Enterprise Collaboration Platform

Technique:

SOAP, Multi-Thread

**2016/5~ 2019/4**

Trend Micro Inc. - Software Engineer In Test

Job description:

Write testing plan, develop testing tool, maintain testing framework, and resolve the issue from the customer

Project & Technique:

Project:

Fake browser - Impersonate the way that four browsers(Chrome, Firefox, IE, Edge) used to encrypt and decrypt the packet to trigger our module scanning process

Technique:

TLS, HTTP, HTTP2, SOCKS, c++, Windows API

Achievement & contribution:

1. 80% time reduction per test case, since we don't need to launch a real browser through Selenium.

Project:

Fake Windows Filtering Platform Callout Drivers - Simulate getting HTTP traffic from Windows callout driver to trigger our module scanning process

Achievement & contribution:

1. 90% time reduction per test case, since we don't need to access the real website.

Technique:

HTTP, TCP, IRP

**2019/11~ 2021/7**

Trend Micro Inc. - Software Engineer

Job description:

Design, develop and maintain Network Scanning Platform, Firewall Module, Windows ETW Event Sourcing Engine

Project & Technique:

Project :

Network Scanning Platform - Responsible for parsing, scanning raw packet from the network and blocking the connection once the malicious was detected

Technique:

C++, Muti-thread, TLS, HTTP, HTTP2, SOCKS, QUIC, Windows Driver, Windows Filtering Platform

Achievement & contribution:

1. Implement QUIC header parser
2. Migrate third-party thread pool to Windows thread-pool, to solve the race condition and memory management issue

Project :

Firewall Module

Technique:

C++, Multi-Thread, Windows Driver, Windows Filtering Platform

Project:

Windows ETW Event Sourcing Engine- Collect ETW events for back-end investigation

Technique:

C++, Multi-Thread, ETW

## **2021/7~ Present**

Simpnic Inc. - Backend Engineer

Job description:

Design, develop and maintain server side applications.

Project & Technique:

Project :

Application notification service - Used to push notification to both mobile platforms Android and iOS

Technique:

C, Multi-Thread, UDP, TCP, HTTP

Achievement & contribution:

1. Throughput has been improved more than 500%, by changing the service from single thread to multi thread

Project :

Device management service - Service side service, used to management, control thousands of devices

Technique:

Node.js, javascript, TCP, RFC: variable-length integers

Achievement & contribution:

1. Design our custom TCP-based protocol using variable-length integers so that we can improve the poor scalability of fixed-byte protocols

## Future Expectations:

Software development covers a wide range. Programming languages and development tools are changing rapidly. I hope that through continuous learning, I can deepen my understanding of software development skills such as object-oriented programming, design patterns, and algorithms. Finally, I can contribute to society as a software engineer.