

# Hsuan Ya (Michael) Tsai

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## WORK EXPERIENCE

### MICROSOFT

#### Senior Software Engineer

*Sep. 2021-Present  
Redmond, US*

- Azure Core Compute - Host Networking Accelerated Networking
  - Building, testing, and deploying networking acceleration (SR-IOV + FPGA offload) on Azure public cloud:
    - Enabled Accelerated Networking for new Hardware/VM/OS SKUs
      - Expanded Accelerated Networking to High Performance Computing SKUs
      - Monitored, collected telemetry, analyzed unknown failure modes and deployed required networking modules/bug fixes to enable Accelerated Networking
    - Designed/Developed Mellanox NIC Qualifying Framework *[python/powershell]*
      - Qualified Azurified build of each new Mellanox Ethernet driver release
      - Developed multiple qualification tests and improved lab automation to make qualification more comprehensive and efficient
    - Developed agent for servicing NIC driver *[C++]*
      - Deployed qualified Mellanox driver releases to millions of Azure production servers
      - Monitored, collected telemetry, mitigated issues found during rollout and deployed bug fixes
    - Mentored junior team members

### MICROSOFT

#### Software Engineer II

*Apr. 2019-Aug. 2021  
Redmond, US*

- Azure Networking - Host Networking
  - Building, testing, and deploying networking acceleration on Azure public cloud.

### MICROSOFT

#### Software Engineer II

*Nov. 2017-Apr. 2019  
Shanghai, China*

- Designed and Developed Protocol Test Suites *[C#]*
  - Validated and aligned interoperability behaviors for new Windows releases or updates.
  - Enhanced test tools and scripts *[C#/Powershell]*
- Utilized Continuous Integration *[Jenkins]*
  - Strengthened Jenkins by introducing Jenkins Pipeline/jenkinsfile
- Performed Document Review and Overview Document Testing for Open Specification in MSDN

### DELL INC.

#### Sr. Software Engineer

*Aug. 2017-Oct. 2017  
Taipei, Taiwan*

- Designed and developed software solutions in Alienware gaming PCs *[C/C++/C#]*

### TREND MICRO INC.

#### Project Lead/Sr. Software Engineer

*Jan. 2015-Aug. 2017  
Taipei, Taiwan*

- Led a team of 5 people to manage and operate a network engine team to discover Advanced Threats and Target Attacks *[C]/[Linux]*
  - Drove Deep Packet Inspection for OSI layer 2/3/4 protocols (TCP/UDP/ICMP/IP/HTTP/etc.)
  - Designed networking-related features:
    - Customized IP, FQDN and URL rules for blacklist/whitelist
    - Packet filter to filter out packets with specified IP-port pair requested by NEC Technologies
    - Packet Capture to assist and support network forensic.
  - Developed DSL operators for real-time threat detection operation team *[lex/yacc]*
  - Designed and improved test tools and build/UT scripts *[C/Python/Perl/gtest/C++]*

### TREND MICRO INC.

#### Software Engineer

*Apr. 2012-Jan. 2015  
Taipei, Taiwan*

## EDUCATIONAL BACKGROUND

### UNIVERSITY OF SOUTHERN CALIFORNIA

#### Master of Science in Computer Science (General)

*Sep 2010-Dec 2011  
Los Angeles, CA*

- Attended in Non-thesis program.

**NATIONAL CHIAO TUNG UNIVERSITY**

**Master of Science in Computer Science**

- Thesis topic: The Design of a P2P Live and Time-Shift Streaming System

*Sep 2007-Jul 2009*

*Hsinchu, Taiwan*

**NATIONAL CHIAO TUNG UNIVERSITY**

**Bachelor of Science in Computer Science**

- GPA 3.70 (26/207)

*Sep 2002-Jun 2007*

*Hsinchu, Taiwan*