

Hsuan Ya (Michael) Tsai

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WORK EXPERIENCE

MICROSOFT

Senior Software Engineer

*Sep. 2021-Present
Redmond, US*

- Azure Core Compute - Host Networking
 - Building, testing, and deploying networking acceleration on Azure public cloud:
 - Enabled Accelerated Networking for new Hardware SKU/VM SKU/OS SKU
 - Expanded Accelerated Networking to Specialize Compute (HPC) SKUs
 - Worked cross-group with HPC, CoreOS and Host Networking team to design and develop methods of servicing of Mellanox Ethernet driver and other required networking modules.
 - Evaluated Datapath performance (Latency/Throughput/CPS) to make sure performance numbers are as expected.
 - Deployed required networking modules/bug fixes to enable Accelerated Networking.
 - Designed and developed filter driver architecture to increase limitation of Virtual Function to be created from 64 to 128 on Azurified servers which gives each host the availability to serve more Accelerated-Networking-enabled VMs
 - Designed/Developed Mellanox NIC Qualifying Framework [*python/powershell*]
 - Improved lab automation to make qualifications more comprehensive and efficient.
 - Developed NIC Agent for NIC driver servicing workflow [*C++*]
 - Deployed qualified Mellanox driver releases to production environment.
 - Monitored, collected telemetry, and mitigated issues found during rollout.
 - Developed Network Management Agent for networking module servicing workflow [*C++*]
 - Automated production workflow and mitigation to reduce unnecessary manual touches which might be harm customers.
 - Onboarded and orchestrated cluster setting validation/cluster-wise mitigation/health check/automatic mitigation.

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

Sep 2007-Jul 2009
Hsinchu, Taiwan

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

NATIONAL CHIAO TUNG UNIVERSITY
Bachelor of Science in Computer Science

Sep 2002-Jun 2007
Hsinchu, Taiwan

- GPA 3.70 (26/207)