Hsuan Ya (Michael) Tsai

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WORK EXPERIENCE

MICROSOFT — *Sep. 2021-Present*
Senior Software Engineer — *Redmond, US*

- Azure Core Compute - Host Networking
  - Building, testing, and deploying networking acceleration on Azure public cloud:
    - Enabled Accelerated Networking for new Hardware/VM/OS SKUs
      - Expanded Accelerated Networking to High Performance Computing SKUs
      - Deployed required networking modules/bug fixes to enable Accelerated Networking.
      - Monitored, collected telemetry and analyzed unknown failure modes
    - Designed/Developed Mellanox NIC Qualifying Framework *[python/powershell]*
      - Developed multiple qualification tests and improved lab automation to make quals 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, and mitigated issues found during rollout.
    - Onboarded and orchestrated auto-mitigation for Accelerated Networking enablement.
    - Mentored junior team members

MICROSOFT — *Apr. 2019-Aug. 2021*
Software Engineer II — *Redmond, US*

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

MICROSOFT — *Nov. 2017-Apr. 2019*
Software Engineer II — *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. — *Aug. 2017-Oct. 2017*
Sr. Software Engineer — *Taipei, Taiwan*

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

TREND MICRO INC. — *Jan. 2015-Aug. 2017*
Project Lead/Sr. Software Engineer — *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. — *Apr. 2012-Jan. 2015*
Software Engineer — *Taipei, Taiwan*

EDUCATIONAL BACKGROUND

UNIVERSITY OF SOUTHERN CALIFORNIA — *Sep 2010-Dec 2011*
Master of Science in Computer Science (General) — *Los Angeles, CA*

- Attended in Non-thesis program.

NATIONAL CHIAO TUNG UNIVERSITY *Sep 2007-Jul 2009*
Master of Science in Computer Science *Hsinchu, Taiwan*
- Thesis topic: The Design of a P2P Live and Time-Shift Streaming System

NATIONAL CHIAO TUNG UNIVERSITY *Sep 2002-Jun 2007*
Bachelor of Science in Computer Science *Hsinchu, Taiwan*
- GPA 3.70 (26/207)