Hsuan Ya (Michael) Tsai

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EXPERIENCE

MICROSOFT — *Senior Software Engineer*

Azure Core Compute – Host Networking | 2021 – Present

- Core engineering contributor to **Azure Accelerated Networking**, enabling hardware-offloaded networking up to **400 Gbps**

- Designed and implemented host networking acceleration drivers using **SR-IOV and FPGA offload**, bypassing virtual switch data path

- Enabled **Azure Virtual Network Encryption**, ensuring secure data-in-transit across Virtual Networks and peered networks with minimal performance impact

- Contributed to **Azure Boost** infrastructure evolution by integrating hardware-accelerated networking components into the host networking stack

- Successfully onboarded Accelerated Networking to **AI GPU SKUs (A100 / H100)** and HPC workloads

- Led staged production rollout across **millions of Azure servers**, including telemetry gating, health monitoring, and mitigation strategies

- Improved lab automation and qualification coverage to increase reliability and reduce validation cycle time

- Mentored junior engineers and contributed to cross-team technical discussions

MICROSOFT — *Software Engineer II*

Azure Networking – Host Networking | 2019 – 2021

- Developed and validated host-level networking acceleration features for Azure public cloud

- Contributed to large-scale deployment and servicing of networking drivers in production

MICROSOFT — *Software Engineer II*

Protocol Test Suites | 2017 – 2019

- Contributed to an open-source interoperability test suite validating implementations against Microsoft Windows protocol specifications.

TREND MICRO — *Project Lead / Senior Software Engineer*

Taipei, Taiwan | 2012 – 2017

- Led a team of 5 engineers developing network engine for advanced threat detection
  - Implemented Deep Packet Inspection across OSI Layer 2–4 protocols
  - Designed DSL operators for real-time detection system

EDUCATIONAL BACKGROUND

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

- Attended in Non-thesis program.

NATIONAL CHIAO TUNG UNIVERSITY   *2007-2009*
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   *2002-2007*
Bachelor of Science in Computer Science   *Hsinchu, Taiwan*

- GPA 3.70 (26/207)