Kayla(Yang-Ching) Liao

• Email: kayla82456385311@gmail.com • Linkedin: (Kayla Liao | LinkedIn) • Portfolio: https://kayla956593.github.io/#
• Medium: https://medium.com/@kayla82456385311 • CPT-eligible starting May 2026 (NEU MSCS Seattle, F-1 visa)

SUMMARY

• Software & Security Engineer with experience in firmware security validation (SPDM, Secure Boot), vulnerability assessment, security testing, and AWS-based secure application development.

TECHNICAL SKILLS

• Programming: C++ (proficient)

• Security: UEFI, SPDM(certificate chain of trust, cryptography), penetration testing (OpenSSL), vulnerability assessment, firmware debugging

• Tools: AWS(Lambda, API Gateway), Git, Flask, Bootstrap, API Design

WORK EXPERIENCE

DELL TECHNOLOGY / Firmware Engineer (Aug 2023-Aug 2025)

17G Server Power – Security Firmware Design

• Conducted penetration-style security validation in C++ on PSU firmware (SPDM with OpenSSL, cryptographic updates), uncovering vulnerabilities that prevented 80% of high-severity issues from reaching production.

• Ensured compliance with NIST & DMTF SPDM standards to meet federal-level security requirements and maintain vendor interoperability (MCRPS, SPDM).

• Partnered with Taiwan/USA/India teams to patch vulnerabilities, reducing deployment failures by 80%.

16G & 17G BIOS -- Server UEFI Driver Project

• Built a UEFI HII driver in BDS for early POST error data capture, improving root-cause analysis speed by 40%.

PSE (Portfolio System Engineer) Project – Cloud-Based Web Tool

• Built a cloud-based visualization tool for system schematics, improving circuit validation speed by 70%.

• Implemented mutex locks to prevent race conditions, ensuring reliable file access in secure environments.

PROJECTS

Movie Assistant Bot — Python, Flask, AWS Lambda, API Gateway, CloudWatch *LINK*

• Deployed a LINE chatbot on AWS Lambda with secure API Gateway endpoints, integrated multiple APIs, and implemented logging/monitoring in CloudWatch.

Secure Real-Time Communication Platform (Java, Android Studio, Firebase, Google OAuth) *LINK*

• Built an Android chat app with secure login (OAuth), encrypted storage, and role-based access control to protect data integrity and privacy.

EDUCATION

Northeastern University, Seattle – M.S. in Computer Science (Aug 2025 -May 2027/present)

Yuan Ze University – Bachelor's in Computer Science (Oct 2019-Jun 2023)