

Kayla Liao 廖揚清 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 hands-on experience in server firmware validation, UEFI driver development, and backend systems.
- Proficient in C++ and SQL, with experience using Python (pandas, numpy) and R for data reporting.
- Experienced in cross-functional collaboration with global engineering teams.

TECHNICAL SKILLS

- Programming: C++, Python (pandas, numpy), HTML/CSS, SQL (MSSQL)
- Firmware/Security: UEFI, SPDM, Secure Boot, Firmware Debugging
- Web/Backend: Flask, Bootstrap, Git, API Design
- Data Analysis: pandas, numpy, R, Excel automation

WORK EXPERIENCE

DELL TECHNOLOGY / Firmware Engineer

(Aug 2023-present)

17G Server Power – Security Firmware Design

- Validated PSU firmware using C++ to meet federal security standards (secure boot, cryptographic updates, device authentication via certificate chain of trust and digital signature), compliance with NIST & DMTF SPDM.
- Defined firmware specifications (e.g., MCRPS, SPDM) for vendor compliance and interoperability.
- Diagnosed and resolved firmware issues, enhancing server power reliability.
- Partnered with USA/India teams, accelerating PSU deployment by 60%.

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

- Developed UEFI HII driver in BDS phase 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 handle concurrency and race conditions, ensuring reliable file access and system stability during repeated executions.

COMPEQ MANUFACTURING CO., LTD. / Web Developer Intern

(Jan 2023-Apr 2023)

- Delivered responsive corporate website with Agile, animated UI using JavaScript, HTML/CSS, Bootstrap, ensuring cross-browser and mobile compatibility.

GLOBAL NET AUTOMOTIVE CO., LTD / Software Engineer Intern (Feb 2022-Jan 2023)

- Developed a secure internal web app using Flask and MSSQL for efficient data visualization and queries.
- Utilized pandas, numpy, and R to process and transform large datasets from the SQL database, generating automated Excel reports for business analysis.
- Assembled and configured systems, network devices, and peripheral hardware to support internal operations.

PROJECTS

Voice gesture control self propelled vehicle – Python, OpenCV, Speech Recognition [LINK](#)

- Raspberry Pi vehicle, controlled with voice and hand gestures to operate the vehicle

3D Jet Game Web Application – WebGL2 & JavaScript, GPU-based Rendering [LINK](#)

- Built an interactive 3D jet simulation game using WebGL2, achieving 60 FPS with dynamic lighting and physics-based movement.

EDUCATION

Northeastern University, Seattle — M.S. in Computer Science (Aug 2025 - 2027) (expected)

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

- Selected Coursework: Introduction to Wireless Internet (A+), Computer Programming (A+)
- Teaching Assistant of Interactive Video Game Development

CERTIFICATES

- AWS Certified Cloud Practitioner | TOEFL 108/120 | Collegiate Programming Examination 3/5