Jo-Yao Hsu (JY Hsu)

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PROFESSIONAL EXPERIENCE

Dell Technologies   **Hybrid, Taipei, Taiwan**
Senior Software Firmware Engineer   *August 2021 - Present*

BIOS/UEFI feature development and platform issue debugging

- Developed UEFI/BIOS firmware for Dell PowerEdge 16G platform hyperscale C-Series server products, performing source code-level debugging for both AMD and Intel systems.
- Designed and developed the D4D (Develop for Diagnosis) feature, significantly increasing BIOS debugging log capacity by 25 times the original, and implementing standardized logging and critical debugging table storage.
- Mentored interns in utilizing BIOS debug logs for organization and analysis, and spearheaded the establishment of an AI model for preliminary detection of BIOS issues.
- Awarded DELL FY25 Game Changer Award for outstanding innovation on D4D feature which fully instrumented boot log captured on every boot and with almost no impact to POST time.

Automated CI/CD workflow implemented for firmware developing, testing and releasing

- Led cross-functional teams of 20 members spanning 8 teams, 4 companies, and 3 countries in collaborative development of automation libraries, a key implementation project at Dell in recent years.
- Implemented automated daily BIOS build and testing across each platform, achieving "Shift-Left Testing" and enhancing program stability. Significantly reduced pre-release testing costs and post-release BIOS error rates.
- Designed and developed the architecture for feature and integration automated testing CI/CD systems.
- Developed user-friendly interfaces for automation systems, enhancing accessibility and usability for diverse teams and stakeholders.
- Awarded DELL FY23 Game Changer Award for pioneering a new BIOS CI/CD workflow, fostering team and ODM ownership, and driving ongoing test case integration.

CECI Engineering Consultants, Inc.   **Taipei, Taiwan**
Technical Leader and Software Engineer   *July 2018 - August 2021*

Software and web-based solution planning, development and maintenance

- Headed custom web development projects as the tech lead for the department's largest project, contributing expertise as a full-stack engineer across 15 large-scale projects.
- Devised a solution to refine address fuzzy matching, resulting in a notable 7% improvement in spatial data positioning precision.
- Overhauled the daily synchronization of cadastral databases between backend systems and external Oracle databases, resulting in a substantial 50% enhancement in fetching new spatial data.

Team capability optimization and innovation initiatives

- Implemented automated third-party API testing, prioritizing integration with project CI/CD workflows to ensure efficient system stability monitoring for developers and maintain high product release quality.
- Directed a five-person development team, showcasing strong communication, coordination, and teamwork skills, overseeing code reviews and providing technical guidance.
- Spearheaded the adoption of Git flow and Agile-based SDLC for the software development team, potentially enhancing development efficiency by 65%.

EDUCATION

National Taiwan University   **Taipei, Taiwan**
Master of Science in Civil Engineering (Concentration: Geospatial Information Science and Surveying)   *September 2016 - June 2018*

- Thesis: Sub-Footprint Roughness Analysis for Riverbeds using Full-Waveform LiDAR Data.

ADDITIONAL SKILLS AND AWARDS

- **Skills:** Linux, UEFI, C, Python, C#, JavaScript, TypeScript, SQL, Node.js, React.js, API, .NET, Git, Jenkins, Docker, AWS, DevSecOps, Security, SonarQube, Vault
- **Certifications:** AWS Certified Solutions Architect – Associate, Professional Engineer Certificate – Survey, Certified Procurement Professional, PMP Training
- **Awards:** FY25 DELL Game Changer Award, FY23 DELL Game Changer Award, 1st Place in Water OpenData IoT Contest, iTHelp Keep Sharing Award 2020.
- **Languages:** Chinese (Native), English (Fluent)