Ying-Fang Jaw

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EDUCATION

University of Wisconsin-Madison — Madison, WI
Master of Science in Computer Science; GPA:3.85 — *Sep. 2023 – Dec. 2025*
Relevant Coursework - Software Engineering, Software Security, Operating Systems, Database Systems, Advanced Networking Systems, Big Data Systems, Data Integration, High Performance Computing, Foundation Model

EXPERIENCE

IBM
Associate Application Consultant — *July 2025 – Aug. 2025*
- Modernized legacy C++ services by containerizing and migrating them to Kubernetes, enabling Blue-Green deployment readiness at TSMC and reducing team workload by 30%.
- Implemented GitOps using Argo CD and Argo Rollouts, cutting deployment time by 25%, improving release stability, and enabling fully automated zero-downtime deployments.
- Developed a middleware layer, achieving a 60% reduction in manual validation time and improving rollout safety by invoking CORBA protocol APIs and relaying results to Argo Rollouts as automated health checks.
- Built a custom load testing tool to simulate 1,000+ concurrent users at peak load, validating the scalability of gRPC API services and uncovering performance bottlenecks.

Institute for Information Industry
Software Engineer — *Jan. 2022 – Aug. 2022*
- Built and deployed an e-commerce backend with Java, Spring Boot and MySQL, achieving 99.9% uptime for 100+ daily users and supporting critical business operations.
- Developed RESTful APIs for core business modules including order, inventory, and payment, handling 500+ daily transactions and reducing latency by 10% through optimized database queries and caching.
- Implemented OAuth2 authentication using Spring Security and Google Identity, enhancing backend security and enabling seamless, secure user login.

OPEN SOURCE

Apache Airflow | *Python, TypeScript, React*
- Resolved a logic bug in the React-based pagination component by refactoring ellipsis rendering, ensuring consistent navigation and UX for high-volume DAG datasets in Airflow 3.0.
- Established comprehensive translation agent guidelines for the Traditional Chinese locale, improving accessibility and maintaining linguistic consistency for the global Airflow user base.

Commitizen | *Python, Pydantic, Pytest*
- Implemented a configurable commit body line limit (50/72 rule), enhancing commit message consistency and readability across diverse development teams.
- Refactored the version command architecture, specifically improving error handling and expanding test coverage for core CLI flags to ensure stable and predictable release automation.

PROJECTS

AI-Driven Database Schema Expansion Tool | *Python, OpenAI, CoT, Prompt Engineering*
- Built a prompt-driven retrieval pipeline that improved data interpretability through accurate semantic expansion of abbreviated column names in relational databases with OpenAI's GPT-3.5-turbo
- Validated the solution across multiple datasets, enhancing schema readability and automation potential while attaining 76–88% accuracy in column name interpretation

Interactive Hard Disk I/O Simulator | *JavaScript, HTML, CSS, C++*
- Developed an interactive hard disk game, showcasing disk I/O in a live demo attended by 200+ people, by building a web GUI with JavaScript, CSS, HTML and implementing algorithms in C++.

SKILLS

Languages: Python, Java, C, C++, SQL
Frameworks & Tools: Spring, Nginx, Redis, Postgres, MySQL, Docker, Kubernetes, Helm, Argo, Grafana, Prometheus, Kafka, Spark, AWS, Azure