# Gene Lin

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## EDUCATION

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| **Rice University** | **Houston, TX** |
| *Master of Computer Science (MCS)* | *December 2025* |
| **Feng Chia University** | **Taichung, Taiwan** |
| *Bachelor of Information Engineering & Computer Science* | *June 2024* |

## WORK EXPERIENCE

**Paycom**  **Irving, TX**
*Software Development Intern | React, TypeScript, Next.js, Docker, AWS Amplify*  *May 2025 – August 2025*

- **Owned end-to-end** delivery of an internal drag-and-drop **UI Playroom** to accelerate design/engineering prototyping and cross-functional reviews; reduced initial load time by **45%** via targeted **performance** profiling and optimization to support **scale**.
- Partnered with **internal stakeholders** (software engineers, UI/UX designers, product managers) to turn workflow friction and review needs into scoped technical requirements; validated **user experience**, **web accessibility**, and **cross-browser** behavior (Chromium/WebKit/Gecko) to reduce defects.
- Built a split-panel workspace (component list, central canvas, **Monaco**-powered editor) with instant re-render and efficient **state management** to speed iteration and improve **developer experience** for internal stakeholders.
- **Containerized** the app with **Docker** and implemented **CI/CD** on **AWS Amplify** (build/test gates, preview deployments), cutting release errors by **80%** and enabling safe **live deployments**, quick rollbacks, and fast **triage of post-deploy issues**.
- Increased **operability** by adding runbooks, structured **logging**, and basic health checks; used **Git** for version control and **code reviews**, and wrote **unit tests** for core flows to protect against regressions.

**SXB Liberal Arts & Science Tutoring Center**  **Yunlin, Taiwan**
*Software Engineer Intern | Python, SQL, Vue.js, HTML/CSS, JavaScript*  *May 2024 – August 2024*

- Delivered an in-house billing and reconciliation system backed by a **MySQL** relational database management system **(RDBMS)** that automated invoice generation and payment tracking; eliminated manual processes and reduced operating expenses by **15%**.
- Migrated legacy records into a normalized schema; designed tables, indexes, and constraints and executed **extract, transform, and load (ETL)** workflows in **Python** using sets/maps to improve data quality and auditability.
- Built **responsive Vue.js** views with reusable components and input validation; implemented **RESTful APIs** and parameterized **SQL** queries to power admin dashboards and internal tools.

## PROJECTS

**Cardz Social Media**
*Tech: React, JavaScript, HTML/CSS, MongoDB, Node.js*

- Implemented a Node.js/Express **RESTful API** for authentication and posts with validation and error handling; tuned **MongoDB** schemas and indexes and deployed to cloud hosting to improve reliability and latency.
- Built a **responsive**, component-based **React** UI with full CRUD and real-time interactions while maintaining **cross-browser** compatibility and target performance budgets; designed endpoints to be **service oriented** and easy to extend.
- Strengthened **quality** by adding **Jest**-based tests for core flows (post CRUD, like/comment) and basic **fraud/abuse prevention** (rate limiting, input sanitization, anomaly flags) with a lightweight **moderation** path.

**Intelligent Travel Consultant and Smart Planning**
*Tech: Vue.js, Python, SQL, HTML/CSS, JavaScript*

- Integrated the **ChatGPT API** and other third-party data sources using **retrieval-augmented generation (RAG)** to deliver personalized recommendations; handled **API integration** details including pagination, retries, and error handling.
- Built modular **Python** services for ingestion/cleaning (set/map de-duplication, batched I/O) and implemented retrieval/ranking plus itinerary **matching heuristics** aligned to time windows and categories.
- Modeled a normalized relational schema in **SQL** (indexes, foreign keys) and embedded the **Google Maps API**; exposed REST endpoints consumed by a **responsive** UI; added basic **monitoring** via logs/metrics.

## TECHNICAL SKILLS

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| **Programming Languages:** | **TypeScript**, **JavaScript (ES6+)**, **Python**, Java, SQL, HTML5/CSS3, Swift, C, C++ |
| **Frameworks & Libraries:** | **React**, Next.js, Redux Toolkit, **Node.js**, Express, Spring Boot, Vue.js, Angular, SwiftUI, Bootstrap, Tailwind CSS, Monaco Editor |
| **Testing & Databases:** | **Jest**, **Vitest**, React Testing Library, **MongoDB**, MySQL, PostgreSQL |
| **Developer Tools:** | **Docker**, **CI/CD**, Git, Unix/Linux, Postman, Jira, **RESTful APIs**, AWS Amplify |

## PROFESSIONAL SUMMARY

MCS graduate from Rice (Dec 2025) with two software engineering internships delivering **reliable**, **scalable** web applications and **RESTful APIs**. Background in **object-oriented programming** (Python/Java), **algorithms and data structures**, **SQL**/databases, and **unit testing**. At Paycom, led a React/TypeScript prototyping platform that improved initial load by **45%** and reduced release errors by **80%** via **Docker** and **CI/CD** with **continuous integration**; added logging, health checks, and runbooks to improve **operability** and **stability**. At SXB, built an in-house MySQL-backed billing system, designed normalized schemas, and shipped **ETL** workflows in Python; added basic **systems monitoring** (logs/metrics). Learns fast under mentorship, takes feedback well, and collaborates across functions to ship reliable features.