

# Jianhong Li

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## EDUCATION

### University Of Michigan

B.S.E. in Computer Science, **GPA: 3.8/4**

Ann Arbor, MI

Aug 2023 - May 2027

- Completed: Advanced Algorithms, Data Structures & Algorithms, Computer Organization, Computer Security
- In-Progress: Operating Systems, Computer Networks, Distributed System, Compiler Construction

## WORK EXPERIENCE

### Amazon - Project Kuiper

Software Development Engineer Intern

Northridge, CA

May 2025 - Aug 2025

- Delivered a production-ready feature to display real-time network traffic metrics on the customer dashboard, implementing the **AWS Lambda** backend function in **Kotlin** and the frontend in **React + TypeScript**.
- Safeguarded **CI/CD pipeline** by writing comprehensive backend (**JUnit**, **MockK**) and frontend (**Cypress**, **Playwright**) tests to validate edge cases and critical workflows, also achieving 95% code coverage.
- Investigated and implemented an **automated customer onboarding process**, leveraging **AWS CDK** to create custom **IAM** roles with internal permissions, significantly improving scalability by eliminating manual setup time by 100%.
- Owned and led the end-to-end development of an internal **CLI** tool in **Go** with 48 commands to interface with functional service APIs, streamlining virtual network setup and helping engineers to **troubleshoot** connectivity issues.
- Worked with **functional** teams in **Agile** sprints with iterative feature delivery, driving alignment through **Git**-based code reviews.

### Kodely & NalaAI

Software Engineer

Remote

Sept 2024 - Present

- Led full-stack development of NalaAI, an AI-powered classroom, delivering features including real-time avatar **lip-sync** animation, LeetCode-style **coding editor**, and intelligent **quiz generation**, — used by over 2,000 students across 200+ schools.
- Scaled and maintained Kodely's management apps using **React**, **TypeScript**, and **NestJs**, automating 45% of administrative workflows for school managers with program scheduling and operation overheads.
- Upgraded platform authentication systems by migrating from self-managed **JWT tokens** to **Firebase Auth** across all applications, improving security, scalability, and user experience.
- Designed and managed a production-scale **PostgreSQL** database supporting 200+ partner schools, 500+ instructors, and educational data including lessons, language translations, and student progress.

### Hong Kong Asian Supermarket

Full-Stack Engineer Intern

McAllen, TX

Jun 2024 - Aug 2024

- Developed a full-stack advertising website using **React** and **Express**, including a 250+ product SQLite3 database, driving 1,500+ monthly visits and a 4.5% increase in sales.
- Designed the infrastructure to deploy our apps with **Docker**, **Google Cloud Run**, and **Nginx** achieving 99.99% uptime.
- Optimized **SEO** through **Google Search Console**, boosting Google rankings to top search results.

## PROJECT

### Super Game Engine & Shape Dungeon

[Github](#)

- Collaborated in a team of 4 to build a modular 3D game engine in modern **C++** with a data-oriented Entity Component System, featuring a real-time **OpenGL** renderer with shader pipelines, batched draw calls, and minimal CPU-GPU synchronization.
- Designed and built Shape Dungeon, an action roguelike game served as a real-world **stress test** for our engine, validating ECS scalability, rendering performance, and gameplay extensibility.
- Acted as Scrum Master, creating and assigning **Jira** tickets to drive **Agile** sprints and coordinated feature development and alignment with **Git**-based code reviews.
- Leveraged **CMake** for build orchestration and **Doxygen** to document the full engine interface and game class structures.

## TECHNICAL SKILLS

**Languages:** C/C++, Go, Kotlin, Java, Python, Typescript, Javascript, SQL (Postgres), HTML/CSS

**Frameworks & Library:** React, NestJs, Node, Express, Tailwind, Smithy, Rive React, Cobra, Log4j

**Cloud & Developer Tools:** AWS (Lambda, EC2, IAM, S3, CDK, Cognito), Firebase, Google Cloud (Cloud Run, Artifact, Search Console), Docker, Kubernetes, Git, Gradle, Jira, VS code, IntelliJ, Linux, CI/CD Pipeline, CMake, Doxygen

**Testing & QA:** JUnit, MockK, Jacoco, Cypress, Playwright, CTest