

# SHANG-CHEN HSIEH

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## Education

### San Jose State University

San Jose, CA

*Master of Science in Computer Science*

*Aug 2025 – May 2027 (Expected)*

*Bachelor of Science in Computer Science, GPA: 3.8/4.0*

*Aug 2022 – May 2025*

## Experience

### San Jose State University

**July 2025 – Present**

*Research Assistant*

*San Jose, CA*

- Conduct research in dynamic rupture modeling using SeisSol, running large-scale simulations on high-performance computing clusters.

### Bercerita

**April 2025 – August 2025**

*Software Engineer Volunteer*

*Remote*

- Engineered and integrated core functionalities for KIRA, a gamified English-learning platform, boosting engagement among Indonesian elementary students.
- Orchestrated Agile workflows within a cross-functional team of 3 engineers, 1 UI/UX designer, and 1 project manager, accelerating development to achieve **70% product completion within 4 months**.
- Architected an agentic system powered by a state machine to autonomously generate AI-driven weekly quizzes, improving content delivery efficiency.
- Built a fully automated CI/CD pipeline leveraging GitHub Actions, Docker, Amazon S3, and AWS Elastic Beanstalk, with integrated unit testing — reducing deployment overhead by **120 man-hours per quarter**.
- Deployed a scalable email-based notification system via AWS Simple Email Service (SES) to streamline user communication and improve retention.

### Developers' Guild

**August 2021 – May 2022**

*Backend Developer*

*Cupertino, CA*

- Designed a blog posting system with REST apis, ensuring the scalability and efficient resource utilization using Springboot framework.
- Optimized SQL queries in MySQL for efficient data management and query execution, resulting in a **13%** improvement in query performance and response times.

## Projects

### Preview Your Professor

**January 2025 – April 2025**

- Engineered a full-stack web application integrating a third-party professor review site, optimizing the class search pipeline for San Jose State University students, reducing information retrieval time **from 5 minutes to 10 seconds**.
- Enhanced accessibility by developing model-based text-to-speech and AI-driven summarization services.

### NexGen

**December 2024 – January 2025**

- Engineered a web-based application to automate cover letter generation using Flask framework, OpenAI API, and Puppeteer/PDFKit for seamless LLM-based content creation and PDF export
- Engineered an AI-driven agent for dynamic PDF generation and instant download, reducing user time spent in job application workflows from on an average of **3 minutes down to 20 seconds**.

## Certification

AWS Cloud Practitioner (Verification Code: a498774ff43e47b083ded31bf49d1bd0)

NVIDIA Getting Started with Deep Learning (Certificate ID: L877N1kHT-uJvAKJLVxfXw)

NVIDIA AI for All: From Basics to GenAI Practice

## Technical Skills

**Languages:** Python, SQL, Java, JavaScript, TypeScript, C/C++, HTML/CSS, Bash  
**Frameworks:** FastAPI, Django, Flask, Springboot, NEXT JS, React JS, ReactNative  
**DB & DBMS:** MySQL, MySQL Workbench, Postgres, pgAdmin4, Alembic  
**Tools:** Git, Postman, Docker, Kubernetes, unix-based OS, XML, JSON, Jira, Confluence