

Qianyong(Harry) Zhang

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EDUCATION

Brandeis University

B.Sc. in Computer Science Major | GPA: 3.67/4.0

Waltham, MA

Sep 2023 - Present

TECHNICAL SKILLS

Languages: Python, Java, R, SQL

Tools: FastAPI, LangChain, OpenAI API, Spring Boot, Redis, MySQL, AWS EKS/ECS, React, Material UI, Vite, SQLAlchemy, RESTful APIs, OpenAPI, Swagger UI, D3.js, Chart.js, Pandas, Git, JWT, Passlib, Jotai

Skills: Data Analysis, AI agent Development, LLM Prompt Engineering, Web Development, API Integration

RELEVANT EXPERIENCE

Schneider Electric

Remote, China

Software Development Engineer Intern

Jan 2025 - May 2025

- **Increased operational efficiency by 50%** through the development of a web-based inventory analytics system with **FastAPI** and **React** to monitor stock levels and forecast procurement needs.
- Optimized robust backend data handling and query performance using SQLAlchemy, Pandas, and FastAPI.
- Designed and implemented **RESTful APIs** for user authentication (**JWT**), inventory retrieval with pagination/filtering, and procurement coverage visualization.
- Enabled complex user interactions and real-time analytics for procurement decisions through seamless frontend-backend integration.

PROJECTS

Spring Boot-Vue.js Video Streaming Platform ([Repository Link](#))

May 2025 - Aug 2025

- Built a full-stack video streaming platform, utilizing a microservice architecture with **Spring Boot** and **Vue.js** to create a scalable (thousands to tens of thousands concurrent users) and feature-rich platform including video uploading, moment posting, live comments, etc.
- Designed a responsive front-end using Vue.js, focusing on video player initialization, dynamic pagination, and real-time statistics based on **WebSocket** for users online.
- Boosted system performance and responsiveness by adopting **Redis-caching** using Redis Template, storing user activities and metadata. Utilizing **RocketMQ**'s message model for asynchronous operations, effectively managing high-concurrency issues.
- Secured data through AES and MD5 encryption, safeguarding user interactions and data streams.

AI Calendar with Intelligent Task Management ([Repository Link](#))

Jun 2024 - Sep 2025

- Engineered an Intelligent to-do list application, utilizing **Litestar** and **React Native** with **Vite**, enhancing user experience for different platforms and integrating asynchronous programming in FastAPI to boost concurrency and reduce latency.
- Implemented seamless frontend-backend integration with **OpenAPI** specifications and **Swagger UI** for maintainability, streamlined API development, and dynamic API testing. Utilized **Tailwind CSS** and **Material UI** to build and optimize responsive, user-friendly software interfaces.
- Integrated **OpenAI API** to enable intelligent task scheduling and prioritization, focusing on improving user productivity through behavioral analysis and deadline management.

AI Agent for Real-Time Search and Workflow Automation

Aug 2025 - Sep 2025

- Developed a full-stack, emotion-aware AI agent orchestrated with **LangChain**, featuring a sophisticated **Retrieval-Augmented Generation (RAG)** system to provide accurate, context-aware responses by querying real-time data from vector stores built with **FAISS** and **ChromaDB**, significantly reducing hallucinations and increasing response relevance.
- Automated enterprise workflows through integrating with **Google Workspace** and messaging platforms, enable natural language task management.
- Built a modular, containerized system with Docker, Git, JWT Authentication, and AES encryption, ensuring secure, extensible, and well-documented code.

How has housing affordability changed across different regions in US ([Repository Link](#))

Sep 2024 - Dec 2024

- Designed an interactive visualization tool to examine housing affordability trends across urban, suburban, and rural areas in the U.S.
- Utilized **D3.js** to create a choropleth map and a scatterplot with interactive brushing, linking, and geographic zooming.
- Conducted data cleaning and preprocessing using Python (pandas, json) and Excel, ensuring a reliable foundation for analysis.