Yue (Elsie) Wu

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EDUCATION

University of California - San Diego　　　　　　　　　　　　San Diego, CA
Master of Science in Computer Science　　　　　　　　　　*Sept. 2024 – Jun. 2026*
New York University　　　　　　　　　　　　　　　　　　New York, NY
Bachelor of Arts in Computer Science　　　　　　　　　　*Sept. 2020 – May 2024*

WORK EXPERIENCE

PayPal　　　　　　　　　　　　　　　　　　　　　　Jun. 2025 – Sept. 2025
Software Engineer Intern

- Collaborated with teammates to design and deploy a **Retrieval-Augmented Generation (RAG)** chatbot on the company's developer center website, indexing **700+** internal documentation pages into a vector database.
- Built retrieval pipelines using **LangChain** with embedding APIs and the company's internal GPT-based model, enabling semantic search, prompt orchestration, and contextual response generation.
- Evaluated and iteratively improved chatbot performance through developer feedback and prompt tuning, increasing response accuracy from **76%** to **92%** and scaling to **3,000+ queries/day**.
- Engineered an **AI agent** on the internal model platform to auto-translate, validate, and extract content, generate change-detection reports, and auto-create **Jira** tickets/**GitHub** PRs; automated processes that previously required manual reporting, saving about **1 person-day/week** and reducing documentation update cycles from **7 days** to **3 days**.

GYFR　　　　　　　　　　　　　　　　　　　　　　Jun. 2024 – Aug. 2024
Software Engineer Intern

- Designed and developed a **Golang-based** bank web service, tailored for operating the **Gin** framework, facilitating account management, real-time balance monitoring, and secure money transfers.
- Developed **gRPC API** with Go for CRUD operations on **PostgreSQL** and implemented protobuf for defining service interfaces. Designed asynchronous processing in Golang using background workers and **Redis** as its message queue.
- Designed and created data schemas with ER diagrams. Optimized **PostgreSQL** queries with rollback functionality to ensure atomic transactions.
- Enhanced the web application's 2FA by implementing an SMS one-time-password authentication with PASETO.
- Built a **CI/CD** pipeline using **GitHub Actions** to automate the testing process. Containerized the application with **Docker**, and utilized **AWS EKS (Kubernetes)** for seamless deployment on **AWS EC2** instances.

JD.com, Inc　　　　　　　　　　　　　　　　　　　　Jun. 2023 – Aug. 2023
Software Engineer Intern

- Designed and developed data visualization modules for logistic warehouses used by 20+ internal teams, focusing on generating charts and connections as a BI tool, utilizing **Spring Boot** and **Vue.js**.
- Designed and implemented **RESTful APIs**, mapping HTTP methods for efficient and reusable routes, with CRUD actions on **MySQL** using **Spring Boot**.
- Designed and implemented an efficient data model and operations using **MySQL** for user info, chart info, and parameters, and optimized the data retrieval with indexing and connection pool.
- Collaborated with UI designers to implement interfaces, including input control and navigational components for chart displays, and a data-driven search lists feature with **Vue.js**, enabling decision making with this tool.

PROJECTS

GYM Application | *TypeScript, Firestore, Node.js, React*　　　　　　May 2024 – Jul. 2024
- Designed and implemented **RESTful APIs** using **Node.js** and **Firestore**, managing user profiles, training sessions, and secure payment processing with Stripe. Ensured real-time data synchronization with Firebase.
- Created responsive user interfaces with **TypeScript** and **React.js**, building reusable UI components and translating complex designs into functional web applications.
- Developed and executed unit and integration tests using **Jest** and **React Testing Library**, achieving **90%+** code coverage across frontend and backend components.

Face Recognition Web Application | *React.js, PostgreSQL, Express.js, Node.js*　　Sept. 2023 – Dec. 2023
- Designed and developed a web application capable of recognizing faces in user-uploaded images with integrated AI using **React** and **Node.js**.
- Implemented **RESTful API** using **Node.js** and integrated with **PostgreSQL** to handle CRUD operations.
- Implemented **JWT**-based user authentication and secured validation for client-submitted data, and addressed password encryption for user registration under **Node.js**.
- Achieved face recognition through images sourced by integrating Clarifai face-detection API and utilized **JavaScript** to implement dynamic client-side pages with reusable components.

TECHNICAL SKILLS

Programming Languages: Java, Python, C/C++, TypeScript, JavaScript, HTML, CSS, Golang, SQL
Frameworks: Spring Cloud, React, Node.js, Next.js, Django, Vue.js, Express, Flask, Gin
Technologies: PostgreSQL, Redis, MongoDB, MySQL, AWS, Git, Kubernetes