David Wang

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Education

Cornell University, College of Arts & Sciences (GPA: 3.79)   Ithaca, NY
Bachelor of Arts in Computer Science, Minor in Mathematics   Expected May 2025
2023 & 2021 Cornell College of Arts and Sciences Dean's List for Excellence in Scholarship
Related Courses: Object-Oriented Programming and Data Structures, Operating Systems, Foundations of Artificial Intelligence, Introduction to Machine Learning, Introduction to Analysis of Algorithms, Introduction to Computer Game Architecture
Language Skills: Fluent in English and Mandarin

Technical Skills

- **Languages:** Java, JavaScript, Python, SQL, GO, Kotlin, C, C++, C#, HTML&CSS, TypeScript, OCaml
- **Databases and Tools:** Git, GitHub, WSL, VS Code, Docker, Postman, MySQL, PostgreSQL, Room Database, Memory Vector Store
- **Frameworks and Platforms:** Express, React, Spring Boot, Ant Design, Elasticsearch, Restful API, FastAPI, Hilt Dependency Injection, Jetpack Compose, Langchain, Google Cloud Platform, Google App Engine, AWS, Windows, Linux, iOS, Android

Work Experience

CloudWalk Technology Co., Ltd.   Shanghai, China
SDE Intern/Shuyu: LLM based Q&A agent for all-format document queries   June 2023-July 2023
- Worked with a team of software developers on a **large language model** based chatbot, developed **REST API** based on **Python FastAPI** for end-to-end communication.
- Performed **API testing** through **Postman** and written over 20 unit tests with **Pytest mocking** to ensure interface correctness.
- Engineered pipeline that processes pdf and epub files to extract tables from documents and answer user queries. Utilized **PaddleOCR** to split documents and convert into **custom document tree structure** for enhanced compatibility with AI reasoning.

Project Experience

OnlineOrder   Shanghai, China
Personal Project/Spring Boot based online food ordering system
- Developed **CRUD REST APIs** using **Spring Boot Controllers**, implemented functions including user registration and authentication, menu searching, ordering, and checkout.
- Leveraged **Spring Data JDBC** to interface with a **PostgresSQL** hosted on **AWS RDS** and manage restaurant, menu, user data.
- Designed the project architecture to separate functionalities into controller, service, repository layers. Employed **dependency injection** for enhanced **maintainability**.
- Built frontend with **ReactJS** and **Ant Design** to allow easy user access
- Containerized and deployed on **AWS App Runner** for scalability

SocialAI   Ithaca, NY
Personal Project/AI based social network
- Developed web service for social network in **Go** with post, search, and **token-based authentication**. Deployed to **Google App Engine** for scalability.
- Used **ElasticSearch**(deployed on **GCE**) to provide efficient searching functions for users and posts.
- Designed and implemented the frontend social network web application in **ReactJS**.
- Used **OpenAI's Dall-E 3** to assist users to create and update posts.

NextAI   Ithaca, NY
Personal Project/Fullstack web-based Q&A agent for PDF document queries
- Engineered an interactive conversational UI leveraging **React** and **Ant Design**, enabling users to effortlessly upload and interact with PDF documents in **real-time**.
- Architected and implemented **RESTful APIs** via **Express** and **Node.js**, optimized for high-performance request handling.

- Utilized a **memory vector store** to cache generated embeddings for efficient retrieval.
- Integrated **OpenAI's GPT-3.5 Turbo API** and **Langchain** technologies, resulting in a sophisticated AI Agent capable of document loading, splitting, storage, retrieval, and output functionalities.
- Allowed intuitive **real-time conversation** with AI agent. Handled audio I/O using **React Speech Recognition** and **Speech Synthesis**.

Minispotify   Ithaca, NY
Personal Project/Personalized Spotify Favorite Management App

- Designed a **Kotlin** Spotify favorite app by fully leveraging **Android Jetpack Library** and **Hilt Dependency Injection**.
- Integrated a **Bottombar** along with app-wide navigation through the **Jetpack Navigation** component.
- Set up a mock **RESTful API** using **json-server** and manage requests with **Retrofit** to ensure seamless data communication.
- Developed the feed, album, and favorite UI screens in **Jetpack Compose**, adhering to the **MVVM** architecture, to enhance code **maintainability** and separation of concerns.
- Integrated **local caching** for the favorites feature with **Room Database**, ensuring fast access and data reliability.
- Incorporated **Google ExoPlayer** for handling global music playback, providing a seamless and consistent audio experience across the app.