

WENJIA ZHANG

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EDUCATION

Columbia University in the City of New York New York, US

M.S. in Computer Science – Machine Learning Track May 2024

- Relevant Courses: Machine Learning, Deep Learning, Natural Language Processing, Computer Vision, Cloud Computing, Software Engineering (SaaS), Databases, Artificial Intelligence

University of Electronic Science and Technology of China Sichuan, China

B.S. in Information Security June 2019

- Relevant Courses: Data Structures and Algorithms, Computer Networks, Operating Systems, Programming in C/C++, System Security, Cryptography

TECHNICAL SKILLS

- **Languages:** Python, C++, JavaScript, Swift, Golang
- **Systems & Tools:** Linux, REST APIs, TCP/IP, Git, GitHub
- **ML/AI:** TensorFlow, PyTorch, scikit-learn, SpaCy, CoreML, CreateML, Generative AI (Gemini API, OpenAI API)
- **Cloud & DevOps:** AWS (EC2, S3, ECS, DynamoDB), GCP (Compute Engine, Cloud Functions), Heroku, Hadoop, Docker, Kubernetes, Terraform, CI/CD
- **Web & DB:** HTML, CSS, React, Node.js, Flask, TypeScript, GraphQL, PostgreSQL, MongoDB, Firebase
- **iOS & AR:** SwiftUI, UIKit, ARKit, AVFoundation, Unity, CocoaPods, Swift Package Manager (SPM)

WORKING EXPERIENCE

CloudStride Consulting LLC New Jersey, US

Founder & Software Engineer Sep 2024 - Present

- Engineered a note-taking web app using **React** and **state management**, enabling intuitive task creation and real-time deletion via interactive UI components ([CodeSandbox](#))
- Built an iOS video editor using **AVFoundation** & **AVKit**, supporting video trimming, voice recording and visual overlays([Demo](#))
- Created a secure real-time messaging app with **Firebase Firestore & Authentication**, delivering instant message updates ([Demo](#))
- Designed a collaborative travel tracking system using **Node.js**, **Express** and **PostgreSQL**, allowing multi-user map marking and journey visualization ([Demo](#))
- Developed an AR flower recognition app powered by **CoreML** with custom-trained models, integrating **SwiftlyJSON** and **Alamofire** to retrieve data from Wikipedia ([Demo](#))

China Mobile Communications Group Co.,Ltd. Anhui, China

System Support Engineer, Business Support Center Jul 2020 - Sep 2021

- **Led** the development of a cloud-based e-commerce platform using **React** and **Python**, integrating a **collaborative filtering recommendation algorithm** based on user behavior, resulting in a **1.8% monthly revenue increase**
- Maintained and optimized **RESTful APIs** with **multi-threading** and **concurrency**, ensuring high availability and low-latency data delivery across millions of requests
- Applied **TCP/IP**, **HTTP**, **DNS**, and **SSL/TLS** protocols to strengthen secure communications in enterprise systems
- Administered **1M+ user records** via **MySQL**, implementing Role-Based Access Control (**RBAC**) to prevent unauthorized access
- Collaborated in a **12-person Agile team**, enhancing system scalability and fault tolerance of distributed infrastructure

PROJECTS

Movie Chatbot Using MongoDB and OpenAI API ([Certificate](#)) Apr 2024 - Apr 2024

- Ingested and embedded movie data in **MongoDB Atlas** for vector-based semantic retrieval
- Developed a **Node.js** backend using **Express** and **Retrieval-Augmented Generation (RAG)** with **OpenAI API**
- Built a **React** frontend to enable user interaction with an LLM-powered chatbot for movie-related queries

LLM-Powered Search Optimization on GCP ([Code](#)) Jan 2024 - Apr 2024

- Designed and deployed **information retrieval** models on **GCP Compute Engine** and **Cloud Functions**, integrating LLM to improve query interpretation
- Applied the **Rocchio algorithm** for iterative query refinement based on user feedback, improving top-k search relevance after each iteration
- Integrated **Google Search API**, **SpaCy**, and **SpanBERT** for named entity recognition and semantic query expansion, enhancing query understanding and efficiency

Second-Hand Marketplace Platform (Team of 4) ([Code](#)) Oct 2023 - Dec 2023

- **Led** full-stack development using **Ruby on Rails**, **React**, and **Kubernetes**, deploying **microservices** with **Terraform**
- Built **REST APIs** for product creation and listings, and authentication(incl. **Google OAuth**), deployed on **AWS EC2 & S3**.
- Implemented **CI/CD pipelines** using **Jenkins**, **Docker**, and **Rspec/Cucumber** with 100% **BDD/TDD** coverage