

# 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

#### 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

Jun 2019 - Dec 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