

# WENJIA ZHANG

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## EDUCATION

### Columbia University in the City of New York

NY, US

#### *M.S. in Computer Science - Machine Learning Track*

May 2024

- Core Courses: Natural Language Processing; Machine Learning; Deep Learning; Computer Vision; AI; Database; Cloud Computing; Engineering Software-as-a-Service.

### University of Electronic Science and Technology of China

Sichuan, China

#### *B.S. in Information Security*

Jun 2019

- Core Courses: Data Structure and Algorithm; Computer Network; Operating System; Programming with C/C++; Network Security; System Security; Web Security; Cryptography.

## TECHNICAL SKILLS

- Languages:** Python, JavaScript, Swift, C++, Golang (*familiar*)
- ML & DS:** TensorFlow, PyTorch, Scikit-learn, NumPy, Pandas, Matplotlib, Seaborn, Plotly, BeautifulSoup, Selenium
- Full-Stack Dev:** HTML, CSS, React.js, Node.js, Express.js, Flask, REST APIs, PostgreSQL, NoSQL, Junit, A/B Test
- Cloud & DevOps:** AWS(EC2, S3, ECS, DynamoDB), GCP, Firebase, Heroku, Terraform, Kubernetes, Docker, CI/CD, Hadoop
- iOS & AR:** Swift, SwiftUI, Unity, ARKit, CoreML, CreateML, AVFoundation, CocoaPods, SPM
- Version Control:** Git, Linux

## WORKING EXPERIENCE

### CloudStride Consulting LLC

New Jersey, US

#### *Software Engineer*

Aug 2024 - Present

- Built a note app using **React.js** for state management, enabling users to add and delete notes for task organization. ([CodeSandbox](#))
- Created a **video editor** app with **AVFoundation** & **AVKit**, allowing users to trim videos, record voice and apply overlays. ([Demo](#))
- Built a **secure** messaging app with **Firebase Firestore** (NoSQL DB), and **Firebase Authentication** to enable real-time communication with instant updates. ([Demo](#))
- Developed a travel tracking app using **Node.js**, **Express.js**, and **PostgreSQL**, allowing multiple users to add travel locations on a map and light up their journey. ([Demo](#))
- Built an **AR** flower **recognition** app using **CoreML** and a custom FlowerClassifier model, integrating **SwiftlyJSON** and **Alamofire** to fetch Wikipedia details. ([Demo](#))

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

Anhui, China

#### *System Support Engineer, Business Support Center*

Jun 2019 - Dec 2021

- Led** the development of a high-volume cloud-based e-commerce platform using **React.js** & **Python**, integrating a **collaborative filtering recommendation algorithm** based on personal behavior, **increasing monthly revenue by 1.8%**.
- Maintained **RESTful APIs** with multi-threading & concurrency, ensuring real-time data security and high availability.
- Familiar with **OSI Model**, **TCP/IP**, **HTTP**, **DNS** and secure communication protocols such as **SSL/TLS**.
- Managed over 1M+ user records via **MySQL**, enforcing Role-Based Access Control (**RBAC**) to restrict unauthorized access.
- Worked in a 12-person **agile** team, enhancing the scalability, performance, and security of **large-scale distributed** systems.

## PROJECTS (More on my [website](#))

### Movie Chatbot Development Using MongoDB ([Certificate](#))

Apr 2024 - Apr 2024

- Ingested movie data into **MongoDB Atlas** and converted it into **vector embeddings** for enhanced retrieval.
- Developed a backend with **Express.js** and **RAG-based AI** retrieval using OpenAI API.
- Built a **React.js** frontend for users to interact with the chatbot and receive movie-related answers.

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

Jan 2024 - Apr 2024

- Implemented NLP-based search optimization models on **GCP**, using **Compute Engine** and Cloud Functions.
- Leveraged Google Search API, **SpaCy**, and **SpanBERT** for entity recognition.
- Demonstrated **LLM-powered** search prediction, improving efficiency and query understanding.

### Collaborative Development of a Second-Hand Marketplace ([Code](#))

Oct 2023 - Dec 2023

- Led a 4-person team to develop a second-hand marketplace with **Ruby on Rails**, **React.js**, managing **microservices** deploy with **Kubernetes** and automating infrastructure provisioning with **Terraform**, improving deployment efficiency and fault isolation.
- Built **REST APIs** for product creation and listings, and authentication(including Google OAuth), deployed on **AWS EC2**, with a responsive UI hosted on **AWS S3**.
- Designed and implemented **CI/CD** pipelines using **Jenkins**, **Terraform**, and **Docker**, ensuring 100% test coverage with RSpec & Cucumber (**BDD/TDD**).