

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

- **Python Dev:** Python, Flask, Tkinter, Web Scraping (BeautifulSoup, Selenium), Data Science (NumPy, Pandas, Matplotlib, Scikit-learn), Machine Learning (TensorFlow, PyTorch)
- **Full-Stack Dev:** HTML, CSS, JavaScript, React.js, Node.js, Express.js, REST APIs, SQL, PostgreSQL ([Udemy Certified](#))
- **Cloud:** Heroku, AWS(EC2, S3), Google Cloud, Firebase
- **iOS & AR:** Swift, SwiftUI, UIKit, ARKit, CoreML, CreateML, AVFoundation ([Udemy Certified](#))
- **Version Control:** Git, Linux

WORKING EXPERIENCE

CloudStride Consulting LLC

New Jersey, US

Software Engineer

Sep 2024 - Present

- 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**, 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

Jul 2020 - Sep 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.
- Collaborated with a 12-person team, applying **agile** development methodologies to enhance system performance and security.

PROJECTS

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 search enhancement using 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**, and **microservices**.
- Built **REST APIs** for product listings and authentication(including Google OAuth), deployed on **AWS EC2**, with a responsive UI hosted on **AWS S3**.
- Built an automated **CI/CD** pipeline with Jenkins, achieving 100% test coverage with RSpec & Cucumber (**BDD** & **TDD**).