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, PostgreSQL, NoSQL (*Udemy Certified*)
- **Cloud & DevOps**: Kubernetes, Docker, AWS(EC2, S3, IAM), Google Cloud, Firebase, Heroku
- **iOS & AR**: Swift, SwiftUI, ARKit, CoreML, CreateML, AVFoundation, CocoaPods, Swift Package Manager (*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 **SwiftyJSON** 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 a **Kubernetes**-managed microservices architecture.
- 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**.
- Built an automated **CI/CD** pipeline with Jenkins, achieving 100% test coverage with RSpec & Cucumber (**BDD** & **TDD**).