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++, SQL, Go (*familiar*)
- **ML & DS:** TensorFlow, PyTorch, SpanBERT, Scikit-learn, NumPy, Pandas, Matplotlib, Seaborn, Plotly, BeautifulSoup
- **Full-Stack Dev:** HTML, CSS, React.js, Node.js, Express.js, Flask, REST APIs, PostgreSQL, NoSQL
- **Cloud & DevOps**: AWS(EC2, S3, IAM), Google Cloud, 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

- Developed scalable web and mobile applications, incorporating **real-time data processing**, **cloud services**, and ML-powered features such as real-time **image recognition** (CoreML).

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 **REST 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

- Built a retrieval-augmented generation (**RAG**) chatbot using MongoDB **vector search** with **embeddings** for enhanced **retrieval** & OpenAI API, improving movie-related Q&A performance.

LLM-Powered Search Optimization on GCP (*Code*)   Jan 2024 - Apr 2024

- Developed an LLM-powered search optimization system on GCP **Compute Engine**, leveraging Google Search API, **SpaCy**, and **SpanBERT** to extract and expand relevant keywords from web pages for improved information **retrieval**.
- Enhanced query relevance and retrieval efficiency by generating semantically related search terms through LLM-driven keyword expansion.

Refining Visual Question Answering with VGG16 and Attentional Deep Learning   Jan 2024 - Apr 2024

- Integrated **VGG16** with attention mechanisms, achieving 87.2% accuracy on Easy-VQA with **CNN** for image features and **LSTM** for question processing.
- Applied data **augmentation** and **softmax** fusion to enhance generalization and classification robustness.
- Outperformed traditional CNN models in complex visual scene 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 **CI/CD** pipelines using **Jenkins**, **Terraform**, and **Docker**, ensuring 100% test coverage with RSpec & Cucumber (**BDD/TDD**).