REINA SHI

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1   EDUCATION

Duke University (08/2024-12/2025)

Master of Engineering in Artificial Intelligence   Durham, NC

Relevant Coursework: Large Language Models, Deep Learning Applications, Modeling Process & Algorithms, Sourcing Data for Data Analytics, Operationalizing AI, Data Science in Banking

East China Normal University (09/2017-07/2021)

Bachelor of Engineering in Data Science and Big Data Technology   Shanghai, China

2   TECHNICAL SKILLS

Machine Learning/AI: PyTorch, TensorFlow, Scikit-Learn, NLP, LLMs

Data Engineering: SQL (HiveSQL, PostgreSQL, MySQL), MongoDB, Hadoop, MapReduce

Cloud/DevOps: AWS, Azure, Docker, Kubernetes, Huggingface, Streamlit

Programming Languages: Python, R, C++, Java

3   PROFESSIONAL EXPERIENCE

Software Development Engineer | Huawei Cloud Computing Technology Co., Ltd. (04/2022-08/2024)
- Spearheaded LLM fine-tuning initiatives using LoRA techniques, achieving 20% improvement in conversation accuracy and 35% reduction in inference latency
- Architected dimensional modeling solutions for large-scale data, and optimized core data pipeline by migrating critical fields from ADS to DWD layer, reducing query time by 30% and improving data accessibility
- Developed an Intelligent Data Quality Alarm System with anomaly detection algorithms, reducing false positives by 40% across 50+ metrics
- Implemented CI/CD pipelines using internal customized workflows, reducing deployment time by 25%
- Served as Knowledge Team Manager, organized 20+ technical training sessions, and mentored 5 junior engineers

Crawler Development Intern | Sinovatio Technology Co., Ltd. (07/2019-11/2019)
- Developed and maintained high-performance web crawlers using Scrapy framework, processing 10K+ daily news articles
- Created automated data cleaning pipeline, reducing manual processing time by 50%

4   PROJECTS

Literary Analysis RAG Assistant | Demo (02/2025-03/2025)
- Built a specialized Retrieval-Augmented Generation system from scratch without relying on frameworks like LangChain
- Deployed user-friendly web application on Hugging Face Spaces with interactive query functionality

Fine-tuning Text to SVG Generation System | GitHub (02/2025-03/2025)
- Fine-tuned Gemma-2B model with LoRA to generate SVG code from text prompts, focusing on accurate spatial relationships
- Developed full architecture including data filtering pipeline, model training and fine-tuning, prompt engineering, and embedding-based evaluation system

AI-Generated Text Detection | GitHub (02/2025-03/2025)
- Developed SeqXGPT, a multi-class classifier that distinguishes between human and AI-written text and identifies specific AI models (GPT-2, Llama, GPT-3)
- Deployed application on Huggingface with Streamlit, creating interactive web UI for real-time analysis

Medical Image Segmentation Application | GitHub (01/2025-02/2025)
- Created a deep learning application for automating medical image segmentation using U-Net+SSPP (Swin Spatial Pyramid Pooling) architecture
- Achieved 85% Dice Score on brain tumor segmentation task, marking a 31.76% improvement over U-Net

Air Piano X: AI-Driven Digital Piano Interface | Demo (10/2024-11/2024)
- Developed computer vision-based virtual piano interface with real-time hand tracking and gesture recognition
- Implemented AI-driven music generation feature using audio language modeling