

De Ren

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EDUCATION

New York University, New York

New York, NY

M.S. in Computer Science, Concentration in Artificial Intelligence

Sep 2023 - May 2025

- **Coursework:** AI, Cloud Computing, Computer Vision, Deep Learning Systems, LLM-based Generative AI Systems

University of California, Irvine

Irvine, CA

B.S. in Computer Science, Specialization in Algorithms

2019 - 2023

- **Honors:** Dean's Honor List
- **Coursework:** Program in C/C++, Intro to DATA MGMT, Intro Software ENGR, Machine/Data Mining, Computer Networks

SKILLS

- **Cloud & DevOps:** AWS (EC2, ECS, SageMaker, Lambda, DynamoDB, S3), GCP, Azure, Docker, Git
- **Programming:** Python (9 years), C/C++, Julia, Shell, Go, SQL
- **Web development & Automation:** HTML/JS, Flask, FastAPI, webmin, , Redis, PostgreSQL, Cloudflare, Postman, Locust
- **Machine learning/Generative AI:** SkLearn, PyTorch, OpenAI API, Hugging Face, Anthropic API, LangChain, AutoGen
- **Certifications:** AWS Certified Machine Learning –Specialty, AWS Certified AI Practitioner, AWS CLP

WORK EXPERIENCE

Datalynn

New York, NY

Machine Learning Engineer internship

Jun 2024 - Aug 2024

- Developed a Python module to extract video, follower, and comment data from over 1,000 TikTok creators via the **TikTok API**, providing data-driven insights for marketing strategies.
- Built a **search engine** for a TikTok creator dataset, capable of processing over 150 data points including product categories, follower distribution, etc., optimized with **OpenAI API** to improve influencer selection efficiency for product endorsements.
- Engineered a **Go-based** tool to automate data extraction from TikTok Sell Center, generating monthly Excel reports from 10+ matrices using the **TikTok Shop API**.

Beijing QuickMeow Technology Co., Ltd

Beijing, China

Software Engineer internship - AIGC Algorithm

Jun 2023 - Aug 2023

- Developed an AI veterinarian chatbot using OpenAI API, **Langchain**, **Chroma**, and **Llamaindex**, which conducts a diagnostic interview through three rounds of questions, refining disease diagnosis based on symptom descriptions and user responses by integrating **RAG** to dynamically retrieve external knowledge
- Implemented a **recommendation engine** within the chatbot using **Gradio** that suggests products from 10+ categories, such as toys for pets that like to chew, by matching user inquiries to our database; contributed to a prototype that secured a \$3 million Angel investment round.
- Enhanced chatbot accuracy by 23% by indexing veterinary diagnostic books into structured data using **Adobe PDF Extract API**, allowing the chatbot to rapidly locate relevant content in response to specific topics or symptoms.

PROJECT

NYU/Citi Trading Competition Platform (Jun 2024 – Aug 2024)

New York, NY

- Designed an **agent** with **Anthropic API** and **AutoGen** to generate and refine trading bots based on a template. Enabled agents to discuss, critique, and improve strategies while verifying and adapting code to fit templates without losing functionality.
- Utilized **Assistance API** to debug generated bots using **PyLint** and simulate data. Designed workflows to ensure the bot can integrate with the online competition platform, adopted by the Citi Competition platform.

Web Development (Aug 2024)

New York, NY

- Developed a [personal website](#) using **FastAPI**, **node.js**, **React**, and Apache, managed via Webmin and secured with SSL on a Godaddy VPS.
- Built an [automated daily news platform](#) with **LangGraph** agent integrating **Google Search API** for content aggregation, **DeepSeek v3** for AI-generated article drafting, and **DALL·E** for image creation. Automated workflows via **GitHub Actions** and **LangGexecute** a Python script daily, storing content in AWS **DynamoDB** and **S3**.
- Engineered a [ChatGPT-like chatbot platform](#) with Vue3 and Vite, powered by a Dockerized FastAPI service, with container images managed via AWS ECR and deployed on AWS ECS using **Fargate**. Leveraged **GitHub Actions** for **CI/CD** and integrated ChatGPT, Claude, and DeepSeek v3.
- Deployed **Whisper** models on AWS EC2 using Docker for STT, **fine-tuned** DeepSeek LLM with **Unsloth**, integrated with personal web search API with(**FAISS**+**GSE**+**all-MiniLM**), and implemented hybrid deployment of **Ollama/LM Studio** models via **Cloudflare/Ngrok** on M4 Mac Mini infrastructure.

AI-Powered Cocktail Generation and Recognition System(Nov 2024)

- Developed an [iOS](#) cocktail app using **Bolt/StackBlitz** with Native React. Built a **Node.js** and **Express** backend with an AWS RDS **MySQL** database. Implemented a **RESTful API** following the **MVC** architecture with **JWT** authentication. Achieved 80% API integration test coverage using **Jest**.

Poker Strategy Analysis Using LLMs with Fine-Tuning (Sep 2024 – Dec 2024)

New York, NY

- Designed a **ETL** pipeline with **YouTube Data API v3** to retrieve video subtitles about poker strategies, complemented by **Selenium web crawlers** for additional insights on poker gameplay. Processed and stored the data in **AWS DynamoDB**, creating a dataset contain 1000 prompt-completion pairs to **fine-tune** a **GPT-4o Mini** model for generating strategy explanations and analyses.