

Hongdao Meng

mycrofthd@gmail.com | [Github](#) | [Linkedin](#) | (718) 3063737 | New York City

EDUCATION

New York University

Master of Science in Computer Science GPA: 3.83

Sep. 2024 - May 2026 (Expected)

New York, NY

Beijing University of Technology

Bachelor of Engineering in Information Security GPA: 4.00

Sep. 2020 - Jul. 2024

Beijing, CN

WORK EXPERIENCE

TikTok, Recommendation System

May 2025 — Sep. 2025

Software Engineer Intern

Seattle, WA

- Developed a Python-based **DAG-DSL** migration toolkit (leveraging **Protobuf** and **regex**) to auto-convert legacy configs of Bytedance Feature Service (BFS) into a unified DSL layer, boosting operator migration throughput by 85%.
- Designed and implemented a **Blade**-based **C++** operator migration pipeline for BFS, streamlining the workflow to improve operator migration speed by 83.3%, and personally migrated 20 operators.
- Architected a one-stop workflow for **User Data Accessor** covering service build, auto-generate Python operators, **DSL** compilation, and **RPC** request, enabling collaboration dozens of engineers and accelerating development by 73.3%
- Engineered a **C++** debug framework for the DAG-based Service Engine, leveraging **gflags** to control on-demand logging of each node's execution details within topologically ordered DAG subgraphs.

C2SMARTER Center

Jan. 2025 — Present

Software Engineer Intern

New York, NY

- Developed a full-stack **RAG**-based chatbot system using **React**, **Redux**, and **Flask**, delivering responsive UI and seamless communication, improving user engagement by 33.7% and reducing data retrieval latency by 23.6%.
- Built a scalable back-end infrastructure with **Docker**, **MongoDB**, **MilvusDB**, and **RESTful APIs**, enabling efficient data storage and retrieval, which improved query performance by 25.6% and reduced deployment setup time by 15.7%.
- Deployed application on **AWS EC2** and implemented **CI/CD** pipelines with **Jenkins**, ensuring high availability and automated testing, which decreased deployment cycles by 18.7% and supported concurrent users from 5k to 10k.
- Implemented an **Grafana-Prometheus** monitoring system for real-time operational insights, reducing MTTR by 25.3%.

Freeleaps

Mar. 2025 — May. 2025

Software Engineer Intern

Seattle, WA

- Designed and developed an AI-driven CI/CD automation platform integrating **GitHub Actions**, **Docker**, **Jenkins**, and **Kubernetes**, enabling intelligent build optimization, smart test selection, and zero-downtime deployment.
- Implemented ML-based failure prediction and AI-assisted log intelligence with **TensorFlow**, **LangChain**, and **GPT-4 APIs**, accelerating build recovery and reducing overall deployment time by over 40%.

DeepFake Detection Startup

Sep. 2024 — Dec. 2024

Software Engineer, Founder

New York, NY

- Developed core modules of a deepfake detection web platform using **React** and **TypeScript** for seamless real-time interaction, enabling 1,200+ concurrent users and reducing client-side rendering latency by 21.3%.
- Built a real-time middleware layer using **Django** and **WebSocket**, achieving 180 ms communication latency.
- Deployed backend services on Kubernetes with **ELB** load balancing, ensuring scalability and reliability.
- Optimized **PostgreSQL** query execution through composite index tuning, reducing average response time by 18%.

QingTeng Cloud Security

Feb. 2024 — Aug. 2024

Software Engineer Intern

Product R&D Department

- Developed a real-time threat detection platform using **Spring Boot** and **MyBatis**, processing 150k+ security logs/day with optimized batch SQL queries, reducing alert latency by 22% (from 650ms to 500ms P95).
- Designed distributed messaging and caching architecture using **RabbitMQ** and **Redisson**, achieving 120ms latency.
- Implemented comprehensive logging and monitoring system using ELK Stack (**Elasticsearch**, **Logstash**, **Kibana**)

SKILLS

Languages: Python, C/C++, Java, Go, SQL, JavaScript, TypeScript, HTML/CSS, Shell, PHP, MATLAB, LaTeX

Frameworks: Blade, React, Vue.js, Django, Flask, Node.js, Spring Boot, PyTorch, TensorFlow, Pandas, MyBatis

DataBase: MySQL, Redis, MongoDB, MilvusDB, PostgreSQL, DynamoDB, Oracle, Firebase, RocketMQ, Elasticsearch

Tools: Git, Docker, AWS, Azure, CMake, Postman, CI/CD, Jenkins, Nginx, LangChain, OpenCV, Jira, Figma, Kibana