

Hongdao Meng

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EDUCATION

New York University

Master of Science in Computer Science GPA: 3.8

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 Infra

Software Engineer Intern

Jan. 2026 — Present
Seattle, WA

- Led the migration of Feature Service to the **DAG-DSL** framework, owning migration planning and dependency decomposition, executing a phased rollout to ensure zero service disruption across critical recommendation pipelines.
- Designed and executed pre/post-migration **Diff validation** and **A/B parity experiments**, achieving metric alignment.

TikTok, Recommendation System Infra

Software Engineer Intern

May 2025 — Sep. 2025
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 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%

C2SMART Center

Software Engineer Intern

Jan. 2025 — Jan. 2026
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

Freeleaps

Software Engineer Intern

Mar. 2025 — May. 2025
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-4o APIs**, accelerating build recovery and reducing overall deployment time by over 40%

DeepFake Detection Startup

Software Engineer, Founder

Sep. 2024 — Dec. 2024
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
- Optimized **PostgreSQL** query execution through composite index tuning, reducing average response time by 18%

QingTeng Cloud Security

Software Engineer Intern

Feb. 2024 — Aug. 2024
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