

V I C K Y D O N G

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EDUCATION

Master of Science, Northeastern University, 2023 - 2026
Major in Computer Science, (GPA: 3.9/4.0)

Core Courses: Data Structures & Algorithms, Software Engineering, Operating Systems, Database Systems, Machine Learning & Statistical Modeling, Data Mining & Predictive Analytics, Pattern Recognition & Computer Vision.

Bachelor of Economics, Shanghai Lixin University of Accounting and Finance, Shanghai, China, 2018 - 2022
Major in Finance, (GPA 3.67/4.0-89.19/100)

Core Courses: Statistics, Linear Algebra, Finance, Economics, Econometrics.

BUSINESS EXPERIENCE

Software Engineering Intern - AIGC Platform, ZhongAn Online P&C Insurance Co., Ltd May 2024 - August 2024

- Developed AI-driven content automation pipelines (keyword→outline→article→rewrite) with prompt engineering.
- Implemented embedding modules with RAG to improve enhance NLP intent recognition in BI tools.
- Managed Linux microservices with Docker and AI Gateway, improving reliability and observability.

Institutional Sales Intern, Essence Securities Co., Ltd September 2022 - February 2023

- Supported client relationship management and data analysis for institutional sales.
- Assisted in organizing roadshows, strategy sessions, and conferences.

PROJECT EXPERIENCE

Distributed Video Platform Backend | Spring Boot, Go, Node.js, Kafka, Elasticsearch, Istio, Kubernetes

- Designed and implemented distributed microservices architecture supporting authentication, video upload, transcoding, and large-scale storage management.
- Integrated ffmpeg, AWS S3, and distributed storage to enable automated transcoding and video segment slicing, reducing storage and processing costs by 40% while ensuring system availability of ≥99.9%.
- Built Kafka + Elasticsearch pipelines for event streaming and real-time search, reducing comment and notification latency to milliseconds and improving video retrieval performance by 70%.
- Deployed services on Kubernetes + Istio + Docker, achieving 3× throughput improvement and supporting millions of concurrent requests, while integrating Prometheus + Grafana for SLA monitoring and proactive alerting.

Batch Orchestration Service | Spring Boot, Spring Batch, PostgreSQL, Docker, Kubernetes, Prometheus, Grafana

- Built scalable orchestration service automating ETL workflows, raising job success rate to >99.9% across distributed systems.
- Added 20+ data quality rules, cutting error rate <0.1% and improving reliability.
- Integrated Prometheus + Grafana for SLA monitoring, reducing batch window by 30% (P95 18min→10min).
- Containerized with Docker + Kubernetes, sustaining 500+ jobs/day and 2M rows/min throughput.

Financial Data Analytics Platform | Python, BeautifulSoup, Pandas

Volos Portfolio Solutions, LLC | February 2024 – May 2024

- Built modular crawlers and parsing scripts to extract and clean large-scale financial data from S&P 500 companies and SEC filings.

Consumer Behavior Analytics with Deep Learning | Python, PyTorch, Scikit-learn, Pandas

BIT Lab, Boston University | September 2024 – April 2025

Built and tested ML pipelines to ensure correct implementation of data preprocessing and model code.

Explored deep learning methods to analyze consumer behavior and marketing strategies, evaluating model impact.

Conducted large-scale data collection and cleaning to support experimental workflows and reproducible results

SKILLS

Languages & Frameworks: Python, Java, SQL, JavaScript, FastAPI, Flask, Pandas, NumPy, scikit-learn, XGBoost, PyTorch, TensorFlow

Systems & Cloud: Linux, Distributed Systems, ETL pipelines, PostgreSQL, MongoDB, Web Crawling, AWS (EC2, S3, CloudWatch), Docker, CI/CD, BI Dashboards, Kubernetes