

Chloe Luo

qwluo@umich.edu | 585-656-0485 | [LinkedIn](#) | www.chloeqwluo.com/ | [GitHub](#) | NO SPONSORSHIP REQUIRED

EDUCATION

University of Michigan

Bachelor of Science in Computer Science, Mathematics and Statistics

Ann Arbor, MI

Expected May 2026

- Cumulative GPA: 3.77/4.0

PROFESSIONAL EXPERIENCE

Bloomberg L.P.

New York, NY

Software Engineer Intern (Buy-Side Stability - Monitoring and Observability Team)

May 2025 – Aug 2025

- Designed and maintained **Logmill**, a log-based, real-time monitoring and latency-metric publishing platform using **React.js**, **Flask**, **C++**, and **Python**, parsing 10M+ daily GUTS log entries to correlate events into workflows and publish metrics to downstream systems; reduced mean time to resolution (MTTR) by ~**25%** for critical services.
- Built new mode for contract monitoring, enabling per-metric thresholds and customizable alert modes that reduced false positives by ~**20%**; integrated **Python** backend logic to allow engineers to manage configurations in real time via GitHub PR-based JSON configs.
- Developed and optimized an end-to-end **Kafka**-based data pipeline for event extraction, correlation, and publishing; improved message processing stability by reducing Kafka lag >**40%** through consumer group parallelism tuning, partition rebalancing, and backpressure-aware consumption logic.
- Implemented and tested a **Kafka** key-based **partitioning** strategy to enable **horizontal scaling** of **logmill-workflow** microservices, achieved **100%** workflow correlation accuracy in POC and projected **2–3×** throughput improvement.
- Designed long-term storage on **AWS S3** like cloud storage to handle 1M+ weekly workflow and contract-monitoring events; improved historical query performance by ~**35%** via parallelized batching and partitioned paths.
- Deployed services via BPaaS (**Kubernetes**-based **PaaS**) with **Jenkins**-like **CI/CD** system; added **C++** unit tests, **Pytest** suites, and static analysis checks, improving test coverage by **28%** and reducing integration defects.

Tencent Games

Shenzhen, China

Software Developer Intern

Jun 2023 – Aug 2023

- Developed **REST** APIs and integration gateways using **Python (Flask)** and **Go** to unify distributed data pipelines with cloud object storage (e.g., **AWS S3**) and analytics APIs, reducing API latency by ~**40%** via connection pooling.
- Built automation bots leveraging **gRPC** and enterprise messaging platforms for real-time notifications, task routing, and workflow deployment; applied **Go** concurrency (**goroutines**, channels) and file synchronization for high-throughput job execution.
- Designed and deployed automation and data integration solutions using **RabbitMQ** (topic-based routing, prefetch limits), **OAuth2** (token caching, role-based permissions), and distributed logging middleware to improve traceability, enhancing operational efficiency by 30%+.

SELECTED PROJECT

Scalable Wiki Search Engine

Ann Arbor, MI

Student Developer

Jan 2025 – Apr 2025

- Built a scalable Wikipedia search engine pipeline using **Python MapReduce** to index 5M+ documents, compute **TF-IDF**, build inverted indexes, and run **PageRank** with damping factor, improving ranking relevance by ~**18%**.
- Developed a **Flask RESTful API** with sparse matrix and caching, and implemented a **React.js + Bootstrap** frontend with virtualized rendering and dynamic snippets, reducing latency from **250 ms to 90 ms** and load time by ~**35%**.

Distributed key-value storage

Ann Arbor, MI

Student Developer

Sep 2024 – Dec 2024

- Designed and implemented a distributed, fault-tolerant **sharded** key-value store in **Go**, leveraging **Paxos** consensus across **replica** groups and a PaxosRSM-based ShardMaster for dynamic shard rebalancing, ensuring linearizable operations during server crashes, network partitions, and reconfigurations.
- Built **net/rpc** services with **gob** serialization, **goroutine** concurrency, and quorum-based fault tolerance; implemented pull-based shard migration, at-most-once semantics, and reconfiguration, validated with race-tested Go tests.

Inventory Management System Project

Ann Arbor, MI

Independent Developer

Jan 2024 – Apr 2024

- Built and deployed a **Spring Boot**-based Inventory Management System with **MySQL** and **Hibernate**, delivering secure **RESTful APIs** with **Spring Security** and **JWT**.
- Integrated observability with **Prometheus**, and **Grafana** for 100% uptime monitoring, containerized with **Docker**, and deployed on **AWS EC2** with full unit/integration coverage using **JUnit** And **Mockito**.

FRAMEWORKS & SKILLS

C++, Python, JavaScript, Java, Go, SQL, MATLAB, Flask, Django, Spring Boot, Node.js, React.js, Vue.js, Bootstrap, gRPC, REST, Kafka, MySQL, MongoDB, DynamoDB, Redis, Kafka, AWS EC2, S3, Docker, Kubernetes, Jenkins, Git