

Yunmu Shu

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EDUCATION

Northeastern University <i>Master of Science in Computer Science (GPA: 3.9/4.0)</i>	Boston, MA Sep. 2022 – Aug. 2025
Northeastern University <i>Master of Science in Financial Mathematics</i>	Boston, MA Sep. 2021 – Aug. 2022
Guangdong University of Foreign Studies <i>Bachelor of Science in Economics</i>	Guangzhou, Guangdong Sep. 2017 – Jun. 2021

EXPERIENCE

Software Developer Intern <i>First Help Financial</i> <ul style="list-style-type: none">Engineered backend modules for an auto loan origination and decisioning platform used by dealers and underwriters, enhancing automation and ensuring regulatory compliance throughout the funding evaluation workflowAnalyzed slow SQL queries in loan transaction module using MySQL EXPLAIN, added composite indexes and optimized pagination with keyset query logic, reducing query latency by 22% under 10k+ recordsBuilt a centralized Vehicle Data Retrieval service integrating Elasticsearch and Redis caching, boosting query throughput by 15% and handling 500k+ monthly search requests across multiple business modulesMonitored and visualized database performance metrics via Prometheus and Grafana to reduce overall CPU utilization	Jan. 2025 – Jun. 2025 Needham, MA
Software Developer Intern <i>Dassault Systèmes</i> <ul style="list-style-type: none">Contributed to backend development of ENOVIA document workflow platform within the 3DEXPERIENCE ecosystem, supporting regulatory compliance and enterprise collaborationDesigned and implemented role-based access control and audit logging for secure document approval and traceabilitySupported and optimized an API Gateway for multi-system document synchronization and metadata retrieval, integrating authentication and routing rules to improve throughput by 28%Introduced centralized caching layer and API rate limiting to enhance system scalability and prevent redundant accessDeveloped asynchronous job handlers using Java Servlet and MQL to process large-scale document import tasks	Feb. 2024 – Jun. 2024 Waltham, MA
Software Developer Intern <i>Rapid Micro Biosystemes</i> <ul style="list-style-type: none">Enhanced backend architecture of a laboratory imaging platform for automated petri dish image capture and data storageOptimized schema by restructuring entity mappings and introducing partitioning strategy to accelerate data retrieval by 25%Refactored legacy PHP codebase into modular service components and integrated automated data migration scripts in Bash, ensuring consistency across 1M+ image records and improving maintainability and release stabilityContainerized development environment with Docker and Apache to replicate production configuration	Jun. 2024 – Aug. 2024 Lexington, MA
Software Developer Intern <i>Tatfook Technology Co., Ltd</i> <ul style="list-style-type: none">Developed a responsive reporting dashboard for user-generated content analytics using Next.js, enabling real-time data visualization, trend tracking, and automated report generation for application usersRefined server-side rendering and API data fetching with Axios, reducing average page load time by 30%Configured CI/CD pipelines utilizing GitLab for code uploads and Jenkins for seamless deployment	May. 2023 – Aug. 2023

PROJECTS

Flash Sale E-commerce Platform <ul style="list-style-type: none">Developed a high-concurrency flash sale system handling 10k+ QPS with Redis caching to minimize database pressureEliminated "Overselling" and race conditions by implementing Redis Lua scripting to execute atomic inventory checks and deductions, ensuring strict data consistency during peak flash sale eventsDecoupled order processing via Kafka for asynchronous traffic shaping, protecting the database from write spikes	Oct. 2024 – Nov. 2024
GeeCache <ul style="list-style-type: none">Implemented a distributed caching system in Go, developing both local in-memory cache and HTTP-based cache with Least Recently Used strategy, and improved inter-node communication using protobufEmployed Mutex locks to prevent cache breakdown and ensure data consistency under concurrent accessIntegrated consistent hashing to select nodes, ensuring load balancing and efficient cache distribution	Jun. 2024 – Jul. 2024

TECHNICAL SKILLS

Programming Languages:	Java, C/C++, Go, TypeScript, JavaScript, SQL, Python
Frameworks:	Spring Boot, Spring Cloud, React.js, Next.js, Express.js, Node.js
Databases & Caching:	MySQL, Redis, MongoDB, PostgreSQL, DynamoDB, Kafka
Cloud & Tools:	AWS, Docker, Kubernetes, Jenkins, Nginx, Git, Terraform