

# Yunmu Shu

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## EDUCATION

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

## EXPERIENCE

<b>Software Developer Intern</b> <i>Dassault Systèmes</i>	Feb. 2024 – Jun. 2024 <i>Waltham, MA</i>
<ul style="list-style-type: none"><li>Assisted the development of quality document control solutions, delivering tailored document management systems to clients compliant with diverse regulatory standards</li><li>Leveraged Java <b>Servlet</b> to architect endpoints in NuoDB by MQL for robust data operations, implementing caching strategies to reduce latency by 55% and minimize excessive database requests</li><li>Developed programs using WinSCP in <b>Linux</b> environment to convert file category configurations from up to 7 different languages to JSON format for the Controlled Document Management component</li></ul>	
<b>Software Developer Intern</b> <i>First Help Financial</i>	Jan. 2025 – Jun. 2025 <i>Needham, MA</i>
<ul style="list-style-type: none"><li>Contributed to the development of a middleware framework supported by Spring REST API and <b>AWS ElastiCache</b> for Redis for caching and replaying of requests to provide service connect external and internal application</li><li>Implemented enhancements for the Decision Lender application using the <b>React.js</b> framework and resolved bug tickets</li><li>Enhanced a Python-based loan structure library for automating the restructuring of loan application itemization</li><li>Coordinated with senior engineers and QA teams using agile methodologies and JIRA for project management</li></ul>	
<b>Software Developer Intern</b> <i>Rapid Micro Biosystemes(NASDAQ: RPID)</i>	Jun. 2024 – Aug. 2024 <i>Lexington, MA</i>
<ul style="list-style-type: none"><li>Proposed and discussed various database schema update options with team members, finalizing a solution that improved scalability and performance by adding over <b>120%</b> more fields.</li><li>Refactored legacy <b>PHP</b> code by introducing object-oriented principles, increasing maintainability and readability</li><li>Set up <b>Apache</b> server locally to simulate production environment for easier development and smooth transitions</li><li>Migrated <b>MySQL</b> data from the server to the local environment to improve development efficiency</li><li>Configured virtual host to test the updated application and used shell scripts for automating database updates and backups</li></ul>	
<b>Software Developer Intern</b> <i>Tatfook Technology Co., Ltd</i>	May. 2023 – Aug. 2023
<ul style="list-style-type: none"><li>Collaborated with backend developers to develop RESTful APIs using <b>Koa2</b> and <b>TypeORM</b> for efficient management of plant observation data, leveraging factory patterns to cohesively generate objects</li><li>Improved user feedback by <b>60%</b> by developing a reporting dashboard with an integrated Modal, leveraging <b>Next.js</b> for server-side rendering and <b>Axios</b> for data handling</li><li>Implemented CI/CD pipelines utilizing <b>GitLab</b> for code uploads and <b>Jenkins</b> for seamless deployment</li></ul>	

## PROJECTS

<b>Tripadvisor App</b>	Oct. 2024 – Nov. 2024
<ul style="list-style-type: none"><li>Developed a Tripadvisor-like application, using <b>Redis</b> as middleware to optimize and implement key functionalities</li><li>Optimized the flash sale feature by implementing read-write separation, utilizing <b>Lua</b> scripts to ensure atomicity of operations and stream <b>Message Queue</b> for order processing, reducing API response time to tens of milliseconds</li><li>Designed user like/follow features with Zset and check-in functionality using <b>Bitmap</b> for best practice</li></ul>	
<b>RookieDB</b>	Sept. 2024 – Dec. 2024
<ul style="list-style-type: none"><li>Implemented core components of a simplified RMDBS, including storage, query processing, and transaction management</li><li>Developed and optimized the <b>B+Tree</b> index structure for efficient query execution, improving search performance</li><li>Designed and implemented multi-version concurrency control (<b>MVCC</b>) for handling concurrent transactions</li><li>Integrated a write-ahead log (WAL) mechanism to ensure data durability and crash recovery</li></ul>	

## TECHNICAL SKILLS

Programming Languages:	Java, C/C++, Go, JavaScript, TypeScript, SQL, Python, Ruby
Frameworks:	Springboot, J2EE, React.js, Next.js, Express.js, Node.js, Django
Databases:	MySQL, Redis, MongoDB, PostgreSQL, DynamoDB, Hibernate
Tools:	AWS, Docker, Postman, Nginx, Git, JUnit, Jmeter, Maven, SLF4J