# STONE LIU

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## **EDUCATION**

## **Northeastern University**

Expected May 2026

Candidate for Honors Bachelor of Science in Computer Science and Mathematics

Boston, Massachusetts

· Awards: Northeastern Honors Program, Deans List

• Relevant Courses: Algorithms and Data Structures, Object Oriented Design, Software Development, Computer Systems

## TECHNICAL SKILLS

Languages: TypeScript/JavaScript, Python, Java, SQL, Bash, C, HTML/CSS

Technologies: Git, Vim, Docker, AWS S3 & Lambda, Nix, Tmux

Frameworks: Pyspark, Pandas, React.js, React-Native, Next.js, Vue.js, Nuxt.js

#### **EXPERIENCE**

## Software Engineer Intern, Morse Corp, Cambridge MA

January 2025 - Present

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## Technical Lead, Generate Product Development Studio, Boston MA

September 2024 - Present

- Led 7 software engineers, creating CI/CD pipelines for end to end API testing and backend deployments with docker images.
- Designed a distributed web server that supported multimedia compression/serving, scheduler services, and client-server auth.
- Continously promoted learning through test driven development, pair-programming, workshops, and agile methodologies.

## Lead Lab TA for CS2500, Khoury College, Boston, MA

September 2024 - December 2024

- Helped 600+ students by teaching systematic program design with topics including structural recursion and accumulators.
- Held weekly lab sessions for 30+ students, reviewing course fundamentals, design concepts/paradigms, and exam reviews.
- Led engaging office hours, enabling students to proactively reason about self-referential data, and graph/tree algorithms.

## Software Development Intern, Spill Center, Boston, MA

January 2024 – August 2024

- Tracked over 800,000 cargo tank facilities and tanks by architecting a centralized web application for cargo tank life events.
- Monitored 10,000+ incidents and alert groups by implementing a geospatial alert service through PostGIS spatial queries.
- Utilized database schemas which mapped regulatory reports to geographic areas, enabling more detailed incident reports.

## **PROJECTS**

Dearly | TypeScript, React-Native, Docker, AWS S3 and Lambda, Nix, PostgreSQL

- · Dearly is a private family-sharing app that bridges generational gaps and makes staying connected easier and meaningful.
- Created CI/CD pipelines that rigorously ran over 500 integration tests as well as containerized and deployed docker images.
- Delivered a type-safe **REST** backend using type generation and architected protocol abstractions over **AWS S3** and **Lambda**.
- Utilized react memoization and image/audio compression, leading to an 80% decrease in API calls and faster loading times.

## Bazaar | Java, Apache Maven, Bash, Google Gson

- Created a distributed trading card game with functional-style Java, where player mechanisms connect over TCP protocols.
- Developed a tree-search algorithm that efficiently searched through millions of candidates using DFS and data accumulators.
- Created a robust server component which protected itself from DOS attacks and malformed JSON responses from clients.
- Built a robust testing harness, allowing serialization/descrialization of external JSON data representations into unit tests.

## **TankFax** | TypeScript, Vue.js, Nuxt.js, MongoDB

- TankFax aggregates the life-cycle details of cargo tanks so buyers can make informed decisions on over **800,000** cargo tanks.
- Designed customer dashboards and tank report pages in a structurally recursive manner, enabling for a robost user interface.
- Built large data generation testing suites, allowing for end-to-end API testing at scale for hundreds of thousands of users.
- Built foundational CRUD endpoints to support cargo tank uploads, user creation, and role-based access with Google OAuth.