# STONE LIU

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#### **EDUCATION**

## **Northeastern University**

Expected May 2026

Candidate for Bachelor of Science in Computer Science and Mathematics (GPA: 3.78 / 4.00)

Boston, Massachusetts

• Awards: Northeastern Honors Program, Deans List

• Relevant Coursework: Fundamentals of Computer Science I & II, Discrete Structures, Logic and Computation, Object Oriented Design, Algorithms and Data Structures, Software Development, Computer Systems

#### Experience

# Software Engineer, MORSE, Cambridge, MA

January 2025

• Incoming Software Engineer.

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

September 2024

- Led a team of **8** software engineers, introducing build workflows through task/git hooks, and OAuth through supabase.
- $\bullet$  Leveraged react memoization and image optimization, leading to a 80% reduction in API calls and rerendering of data.

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

September 2024 - December 2024

- Helped 600+ students by teaching fixed and arbitrary sized data, structural/generative recursion, and accumulators.
- Held weekly lab sessions for 30+ students, reviewing course fundamentals, design concepts/paradigms, and exam reviews.

# Software Development Intern, Spill Center, Boston, MA

January 2024 – August 2024

- Tracked over 800,000 cargo tank facilities and tanks by architecting a web application for cargo tank life events.
- Monitored 10,000+ incidents and alert groups through integrating GIS mapping with the RESTful back-end API.

# **PROJECTS**

# **Snapper** | React-Native, TypeScript, MongoDB, AWS

- Snapper is a gamified social platform for divers and marine enthusiasts alike to learn more about the marine life around them.
- Developed an S3 protocol where images would be parsed and uploaded or deleted from their respective S3 buckets.
- Developed paginated endpoints for users, dives, and fish collections. Utilized full-text search to support fuzzy finding.

## Bazaar | Java, Maven, Bash, 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.

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

- TankFax aggregates the life-cycle details of cargo tanks to allow informed decisions on over **800,000** cargo tanks.
- Built dynamic CRUD endpoints to support database transactions and created realistic data-gen scripts for testing scalability.
- Designed structurally recursive user dashboards, tank report pages, and stored their representations using database schemas.

### **LEPC/SERC Webscraper** | Python

- Developed a large-scale web crawler that scraped over **15,000** websites for LEPC and SERC contacts.
- Built dynamic, multi-threaded search queries and custom content filters through Google Search's REST API.
- Intelligently scraped utilizing various GPT AI models, applying custom function calls to structure API responses.

#### **Couplet** | React-Native, TypeScript, Golang, PostgreSQL

- Couplet is a dating app focusing on meaningful connections through shared interests in local events and activities.
- Implemented global state management through redux to allow sharing of user state across the onboarding flow.
- Developed CRUD API to support user/event creation, user/event recommendations, and user matching algorithms.

#### Chinese Language Table | React.js, TypeScript, Next.js, MongoDB, AWS

- The Chinese Language Table website is an extension of the student-driven Northeastern club, focusing on learning Chinese.
- Designed and implemented the user interface for navigating the landing page, club events, news, and login/signup pages.
- Architected a REST backend, handling CRUD operations for club events, Google OAuth, and storing files with AWS S3.

#### TECHNICAL SKILLS

Languages: Java, TypeScript, React, Python, Bash,

Technologies/Frameworks: Git, Maven, React.js, Vue.js, Next.js, Nuxt.js, React-Native, Vim