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, creating a complete typesafe REST API and enabled full end to end tests through mocks.
- Leveraged react memoization and image optimization, leading to **80%** reduction in API calls and **50%** faster render times.

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

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.

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.

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.

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.

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.

TECHNICAL SKILLS

Languages: Java, TypeScript, Python, SQL, React, Bash
Technologies/Frameworks: Git, Vim, React.js, Apache Pyspark