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, C/C++, SQL, Bash, HTML/CSS
Technologies: Git, Vim, Docker, AWS S3 & Lambda, Nix, Tmux
Frameworks: Pyspark, Pandas, Polars, 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/deserialization 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.