Stone Liu

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Education

Northeastern University — Boston, Massachusetts
Candidate for Honors Bachelor of Science in Computer Science and Mathematics — *Expected May 2026*

- **GPA:** 3.79 / 4.00
- **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
Technologies: Nvim/Vim, Docker, Git, AWS S3 & Lambda, Nix
Frameworks/Libraries: Pyspark, Pandas, Polars, React.js, React-Native, Next.js, Vue.js, Nuxt.js

Experience

Software Engineer Co-Op — January 2025 – Present
Morse Corporation — *Cambridge, MA*

- Built core infrastructure for data analysis pipelines aimed at algorithmic testing and evaluation of object detection models.
- Designed a scalable test harness using **Apache Spark**, supporting parallel data processing on **100 million+ metrics** enabling team members critical insights on model performance.
- Deployed model runners and inference processing pipelines using **OpenCV**, automating metric calculations for multiple vendors and reduced metric turnaround time by over **50%**.

Technical Lead — September 2024 – April 2025
Generate Product Development Studio — *Boston, MA*

- Led a team of 7 software engineers, designing containerized **RESTful** server applications using the *OpenAPI* specification.
- Designed a distributed web server that supported multimedia compressing/serving through **AWS S3** and scheduled push notifications through **AWS Lambda**.
- Enabled real-time notification services through **Supabase** database subscribers and designed type-safe database transactions using **Drizzle-ORM**.

Lead Lab TA – Fundamentals of Computer Science I — September 2024 – December 2024
Khoury College — *Boston, MA*

- Helped **600+** introductory computer-science students by teaching systematic program design with topics including structural recursion and accumulators using Racket ISL.
- Held weekly lab sessions for **30+** students, reviewing course fundamentals, design concepts/paradigms, and exam reviews.

Software Engineer Co-Op — January 2024 – August 2024
Spill Center — *Hudson, MA*

- Created a centralized web application for cargo tank owners and operators using **Nuxt.js**, enabling customers to view detailed reports on over **800,000+** cargo tanks.
- Monitored **10,000+** incidents and alert groups by creating a geospatial alert service through **PostGIS** spatial queries.

Projects

Dearly | *TypeScript, React-Native, Docker, AWS S3/Lambda, PostgreSQL*

- Dearly is a private family-sharing app bridging generational gaps and makes staying connected easier and more meaningful.
- Deployed CI/CD pipelines using **Github Actions**, automating over **500+** integration tests using **Jest** and containerized deployments through **Docker**.
- Cached API requests using **TanStack-Query** and compressed image/audio content through **Sharp**, leading to an **80%** decrease in API requests and **50%** faster loading times.

Fluid-OAS | *TypeScript*

- *Fluid-OAS* is a declarative *domain specific language* expressing type-safe HTTP APIs through the OpenAPI specification.
- Created a fluent, object-oriented API allowing developers to repeatedly chain together methods, enabling more maintainable API specifications.
- Maintained backwards compatability among all OpenAPIv3 specifications through interface segregation, supporting **1500+** developers in building type-safe **RESTful** APIs.

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

- Created a distributed trading card game using functional-style Java, where player mechanisms connect over **TCP/IP**.
- Created a robust concurrent server using Java futures, protecting itself from DOS attacks and malformed JSON responses from clients.
- Developed a greedy, AI player algorithm that determined the most optimal set of moves from over **1,000,000+** sequences using DFS and greedy optimizations.