Ryan Le

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EDUCATION

Stanford University **June 2026**
B.S. in Computer Science | GPA: 3.9 *Stanford, CA*

- Coursework: Compilers, Parallel Computing, Distributed Systems, Computer Architecture, Operating Systems, Computer Networking, Machine Learning, Data Structures & Algorithms, Linear Algebra
- Activities: Association for Computing Machinery, CS198

TECHNICAL SKILLS

Languages: C/C++, Python, Java, JavaScript, SQL, Typescript
Developer Tools: GDB, Valgrind, Vim, AWS, Git, Unix, VS Code, IntelliJ, PyCharm

EXPERIENCE

Stanford Compilers Group **November 2024 – Present**
Research Assistant – Advised by Alex Aiken *Stanford, CA*

- Developing extensions for FlexFlow, a high-performance, low-latency search-based compiler that simultaneously identifies algebraic transformations and parallelization strategies for distributed DNN training.

Stanford School of Engineering **March 2024 – Present**
Undergraduate Teaching Assistant *Stanford, CA*

- Lead weekly sections and interactive grading sessions for 8-10 students in Stanford's intro programming/data structures sequence in Python & C++
- Provided personalized assistance and debugged student code in office hours twice a week
- Graded assignments, midterms, and final exams

Amazon **June 2024 – September 2024**
Software Engineer Intern *Austin, TX*

- Fully engineered an AWS Lambda-based automation system, using Java and Typescript, that streamlined configuration updates needed for Amazon's central route estimation machine learning model to run daily
- Redesigned JSON configuration artifact with multi-granularity and to include data for all delivery stations globally, reducing sources of truth from six to one and cutting manual update time by 50%
- Leveraged EventBridge Scheduler for programmatic Lambda triggers and AppConfig for versioned configuration artifacts and rollbacks.
- Utilized S3 storage service and DynamoDB database for efficient tracking, retrieval, and storing of configurations for every delivery station, once materialized from AppConfig configuration artifact
- Achieved a 50% improvement in latency from the previous system

Flowers Foods & Subsidiaries **June 2023 – May 2024**
Software Development Intern *Thomasville, GA*

- Engaged with 40+ clients to debug issues related to pre-existing ABAP scripts in the SAP landscape, making adjustments to optimize performance and enhance functionality within the script production environment
- Migrated and debugged 300+ Precisely Evolve (Winshuttle) scripts to the new company system
- Created functional design documents for the company's central delivery, customer, and item backend, analyzing 50+ SQL queries and documenting 75+ key functionalities and processes
- Received offer to return on a part-time basis (Sep 2023 - May 2024) following internship success

PROJECTS

COOL Compiler | *C++, Flex, Bison*

- Implemented a compiler for COOL (Classroom Object-Oriented Language) from scratch, encompassing lexical analysis, parsing, semantic analysis, garbage collection, and code generation.

Heap Allocator | *C++*

- Re-implemented the explicit heap allocation scheme utilizing a doubly-linked list with an address-order approach, in-place reallocation, and coalescing to achieve 92% utilization and 250 instructions/request

MyTinnitusApp | *SwiftUI*

- 6000+ downloads on App Store; collaborated with TinnitusHub (notable nonprofit); recieved news coverage