

Lawrence Liu

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EDUCATION

Purdue University

West Lafayette, IN

BS in Computer Science, Minor in Economics

Expected Graduation: May 2027

Coursework: Object-Oriented Programming, Programming in C, Statistics, Computer Architecture, Data Structures & Algorithms, Systems Programming, Operating Systems, Software Engineering, SQL

EXPERIENCE

DevOps Intern (Incoming)

May 2026 – August 2026

Keysight Technologies

Colorado Springs, CO

- Selected for a DevOps internship supporting build infrastructure using Kubernetes, virtual machines, and Jenkins
- Will contribute to automation solutions to expand CI/CD usage across teams and support engineering workflows
- Expected to assist with containerized environments, infrastructure tooling, and system reliability initiatives

Data Scientist Intern

Aug 2023 – May 2024

Bayer, The Data Mine

West Lafayette, IN

- Partnered with product stakeholders in Agile sprints to architect and deploy predictive models for optimizing plant yield, ensuring high scalability and reliability
- Engineered data pipelines that cleansed and transformed datasets exceeding 15,000 records using Python and R, streamlining the data preprocessing workflow
- Developed and integrated machine learning models (Random Forest, Neural Networks, kNN, and Linear Regression) that consistently achieved over 70% accuracy

PROJECTS

DSA Versus | *TypeScript, Node.js, React, PostgreSQL, Redis, WebSockets, Docker, Github Actions*

- Building a real-time 1v1 coding platform supporting 20+ concurrent users/matches with <1 s state synchronization latency via WebSockets and Redis-backed matchmaking/Elo queues
- Engineering a sandboxed execution pipeline processing submissions in isolated Docker containers orchestrated with Docker Compose + Judge0, preventing arbitrary code execution
- Designing and deploying backend APIs and relational schemas managing user accounts, rankings, match history, and submissions, with CI/CD pipelines (GitHub Actions) and containerized services

Custom Shell | *C++, Bash, C, Lex, Yacc*

- Developed a custom shell in C using Lex/Yacc with command parsing, implementing pipelines, I/O redirections, and subshells
- Engineered signal handling (SIGINT/SIGCHLD) for Ctrl-C interruption while ensuring zero memory leaks
- Built a terminal line editor with history navigation and regex-based wildcard expansion

ACTIVITIES

Korean American Student Association Vice President

November 2023 – May 2025

- Oversaw executive board of 10+ and managed events for 100+ general members
- Increased engagement leading to an increase of 50% member acquisition over past years
- Organized big-little groups and 20 events per semester for club members, including dance workshops with celebrity guests

TECHNICAL SKILLS

Languages: Java, Python, SQL, C, C++, Javascript, HTML/CSS

Frameworks/Libraries: React, Node.js, Flask, JUnit, Pandas, NumPy

Tools: Git/GitHub, VS Code, Tableau, Jupyter Notebook, Docker, Visual Studio, MS Office, PowerPoint, Teams, Agile

Soft Skills: Communication, Adaptability, Problem Solving, Teamwork, Leadership

Languages: English, Spanish, Japanese, Cantonese