

# William Liu

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## EDUCATION

### University of Western Ontario

**Graduation Date:** May 2027

*Honors in Computer Science and Honors in Business Administration (HBSc. + HBA)*

**GPA:** 3.8/4.0

- Awards: Dean's Honor List, Western Scholarship of Excellence (\$8000), Andrew & Sarah Hamilton Scholarship (\$6600)
- Relevant Coursework: Data Structures & Algorithms, Linear Algebra, Software Tools & Systems Programming, Computer Organization & Architecture

## WORK EXPERIENCE

### Meta & Major League Hacking

Jun 2025 – Sep 2025

*Production Engineer Fellow*

*Remote*

- Reduced deployment time of Flask app by 41% by optimizing Docker containers using layer caching and automating deployment process with GitHub Actions and Bash
- Increased test coverage of web application to 96% via the implementation of additional unit tests and integration tests
- Strengthened system reliability by implementing Linux system and container monitoring, alerting, and visualization using Prometheus and Grafana

### Trojan Technologies

May 2025 – Aug 2025

*Data Engineer Intern*

*London, ON*

- Achieved 27% increase in end-to-end migration of legacy data tables to Snowflake by building automated data ingestion and transformation workflows using Python and Airflow DAGs
- Decreased redundant data volume by 38% by standardizing and cleaning raw JSON data using SQL and regex-based parsing
- Increased data backfilling coverage for Airflow DAGs by 53% to recover missing historical data caused by data ingestion failures
- Improved team efficiency by automating deployment of production-ready code with a Jenkins CI/CD pipeline and Bash

### Streamforge

May 2023 – Aug 2023

*Software Engineer Intern*

*Montreal, QC*

- Enabled 100+ aggregated data results per minute to increase available Twitter data for creator outreach purposes by developing an ETL pipeline using Node.js and Selenium
- Generated 800+ potential sales leads to support targeted client outreach by building automated dashboards using Node.js to retrieve publishing data from APIs on upcoming indie game releases
- Drove over 70,000 clickthroughs by facilitating advertising campaigns for major video game titles such as Remnant II

## LEADERSHIP

### Lead Web Developer

May 2023 – Present

*Hack Western*

*London, ON*

- Spearheaded the development of the web presence for one of Canada's largest collegiate hackathons serving 1400+ applicants
- Developed React-based draggable canvas and interactive elements animated using CSS for hackathon promotional website

## PROJECTS

### Anishelf | TypeScript, Next.js, Flask, PostgreSQL, GraphQL, Docker, nginx

- Developed a full-stack web application using Next.js and Flask to automatically generate exportable vocabulary flashcard decks for foreign languages based on subtitles extracted from animated series
- Deployed app using Docker containers on a DigitalOcean VPS, utilizing nginx as a reverse proxy to manage traffic

### YACHIP-8 Emulator | Rust, SDL2

- Developed a CHIP-8 emulator using Rust to emulate CHIP-8 system architecture
- Implemented a CPU including the CPU instruction set, registers, and memory management and a front end to display graphics using SDL2

## TECHNICAL SKILLS

**Languages:** Python, TypeScript, JavaScript, Java, Rust, C++, Bash, HTML, CSS

**Frameworks/Libraries:** React, Node.js, Express.js, Next.js, Flask, SQLAlchemy, Selenium

**Tools:** Git, Linux, Unix, Docker, MongoDB, PostgreSQL, GraphQL, AWS, Snowflake, Apache Airflow, DigitalOcean, nginx, Jenkins