Simon Lippitt

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Education

Wilfrid Laurier University Sept 2023 – April 2027

BSc, Computer Science (GPA: 3.9/4.0) *Waterloo, ON*

- **Activities:** Competitive Programming Club (President), Open House Student Representative

Experience

Software Engineering Intern Summer 2024/2025

xMentium *Denver, CO*

- Developed end-to-end user-facing features by gathering requirements, implementing backend logic in TypeScript, and deploying applications using Docker and Kubernetes in CI/CD pipelines.
- Designed and implemented RESTful API for package filtering with advanced query, grouping, and sorting capabilities, improving application load time by 10% and reducing manual overhead for end users.
- Led refactoring initiative for legacy codebase components to reduce system coupling and improve modularity and test coverage, resulting in 30% reduction in production bug reports.
- Collaborated with cross-functional teams including QA, Product Management, and DevOps to deliver production-ready features within tight deadlines using Agile methodology and Git version control workflows.
- Built full-stack internal tools using React, Node.js, and PostgreSQL to enable teams to view, monitor, and manage document automation processes and workflows.
- Presented technical projects and solutions to 20+ engineers and product managers, receiving positive stakeholder feedback and contributing to roadmap planning for future development cycles.

Machine Learning Research Intern Winter 2025

Wilfrid Laurier University *Waterloo, ON*

- Conducted research on enhancing GPS map matching algorithms using deep learning techniques, collaborating with faculty and graduate students to develop and evaluate novel machine learning models.
- Designed and implemented data preprocessing pipelines in Python using NumPy and Pandas to clean and transform real-world GPS datasets for model training and evaluation.
- Authored technical research reports and presented findings in weekly team meetings, communicating complex machine learning results to guide project development and research direction.

Teaching Assistant Sept 2024 - April 2025

Wilfrid Laurier University *Waterloo, ON*

- Facilitated drop-in lab sessions for second-year Computer Science courses, providing academic support to 200+ students on core concepts including algorithms, data structures and object-oriented programming.
- Evaluated and graded student assignments across multiple CS courses, delivering detailed constructive feedback to improve student understanding and ensure alignment with learning objectives.

Projects

Uni Vision | *Go, Javascript, ReactJS, PostgreSQL* April 2025

- Built full-stack academic analytics dashboard with Go backend, PostgreSQL database, and React frontend to help students visualize grades and track academic performance.
- Implemented predictive analytics algorithms to calculate required scores on future assignments and tests for students to achieve desired course grades.
- Developed RESTful API endpoints and normalized database schema to efficiently manage student academic records, grade calculations, and performance metrics.

FileStream | *Python, Sockets, Threads* Jan 2025

- Built TCP-based client-server application in Python using socket programming to enable secure and efficient file transfers between multiple clients and centralized server.
- Implemented multi-threaded server architecture to handle concurrent client connections and file download requests with proper error handling and connection management.

Skills

Programming Languages: Typescript, Go, Python, C/C++, Java
Technologies & Tools: React, Node.js, PostgreSQL, Docker, Kubernetes, Git, Linux, REST APIs, CI/CD Pipelines