

# Coleman Lai

Vancouver, BC, Canada | (778) 222-9467 | ccl46@sfu.ca | colemanlai.com | linkedin.com/in/coleman-lai

## Education

### BSc, Major in Computing Science

Sep 2023 – Present

Simon Fraser University, Burnaby, Canada | GPA: **4.00**

Dean's Honour Roll × 2, President's Honour Roll, SFU Open Scholarship × 3

## Experience

### Software Developer, Gen AI Co-op | IFS Copperleaf

Sep 2025 – Present

### Developer | SFU Surge (Student Organization)

Jul 2025 – Present

- Developed full-stack, secure websites for cases including a [hackathon sites and portals for 1000+ participants](#)
- Worked with [product and visual design teams](#) through Figma and Notion to design and build the web applications

### Website Administrator and Designer | iListen Canada

Jul – Oct 2024

- Upgraded company website built on WordPress, ensuring [alignment with company values](#) and increasing appeal
- Constructed a well-documented maintenance document, containing results of a [needs analysis](#) of the site
- Achieved 99%+ Lighthouse scores across SEO, performance, and accessibility through targeted site optimizations

## Projects

### grid-detection | Python, PyTorch, NumPy, Pillow | [🔗](#)

Jul 2025

- Developed a [machine learning-based computer vision pipeline](#) to infer grid sizes from origami box-pleated crease patterns, allowing for detection of 23 of the most common grid sizes in an accurate and rapid manner
- Used a previously [self-developed Python library](#) for crease pattern manipulation to aid the preprocessing pipeline

### Hermes | Hugging Face MCP Hackathon | React, TypeScript, Python, Node, Docker, MCP, PostgreSQL | [🔗](#)

Jun 2025

- Programmed a [Model Context Protocol](#)-enabled tool that [automates asynchronous API calls](#) with configurable functions, simplifying API monitoring, data logging, and performance analysis through secure authorization steps
- Structured [adaptive API handling](#) in Python, including parsing of header tokens and complex user parameters
- Linked functions to SQL database operations, ensuring properly handled edge cases and data security

### Project SPHENE (Most Original Hack) | DreamHacks | React, TypeScript, Node, OpenAI, MongoDB | [🔗](#)

Mar 2025

- Created a [backend system utilizing AI agents](#) to cross-reference peer content and suggest missing material
- Designed a system to detect knowledge gaps and generate style-matched suggestions using the OpenAI API

### Data Dave | nwHacks | React, TypeScript, Flask, NumPy, OpenAI | [🔗](#)

Jan 2025

- Built a [CSV analysis AI assistant](#) that makes [data analysis accessible](#) by generating plots, summarizing data, and performing accurate calculations on large CSV files through a chat-like interface, made in React and Python.
- Engineered a [context-aware LLM system](#) to prevent AI context loss and hallucinations, ensuring accurate analysis
- Implemented dynamic visualization generation and data analysis using OpenAI API's function calling capability

### Be Square (Best AI Hack) | StormHacks | JavaScript, Node, OpenAI, Adobe API | [🔗](#)

Oct 2024

- Created an Adobe Express add-on for [agentic canvas element generation](#) through natural language processing
- Set up over parametrized 12 function calls for [real-time natural language generation](#), integrating OpenAI API
- Engineered a WebSocket connection, linking server-side function calls to client-side element creation functions

## Skills

**Languages:** Python, JavaScript, TypeScript, HTML/CSS, C, C++, SQL, C#, R

**Programs/Tools:** Visual Studio, VSCode, Git, OpenAI API, MCP, Docker, PyTest, WebSocket, Unity, WordPress

**Libraries/Frameworks:** PostgreSQL, MongoDB, Node.js, React, TailwindCSS, ExpressJS

**Other:** Agile, Scrum, DevOps, DSA, CI/CD, Software Development Lifecycle (SDLC), Socket Programming