

Liam Jay

(902)-489-8866 | liam.jay@smu.ca | linkedin.com/in/liam | github.com/liam

EDUCATION

Saint Mary's University

Bachelor of Science, dual major in Computer Science, Mathematics — cGPA: 3.98

Halifax, Nova Scotia

Sept. 2023 – Present

Hiroshima University

Special Auditing Student, School of Informatics and Data Engineering

Saijō, Hiroshima

Sept. 2024 – Aug. 2025

TECHNICAL SKILLS

Languages: Java, Python, C++, Go, GD Script

Frameworks/Libraries: TailWindCSS, React

Developer Tools: Git, CMake, clang++, LLVM, VS Code, CLion, IntelliJ, GoLand, PyCharm, Visual Studio, Atom

AI Tools: Claude 3.7 Sonnet, Cursor, ChatGPT, Deepseek-R1, ollama, v0

Language Proficiency: English (Native), Japanese (C1), Mandarin (A2) Cantonese (A2)

PROJECTS

Banter — Compiler (Ongoing) | C++26, LLVM, Parsing, Systems Programming

May 2025 – Present

- Designed a custom compiler frontend supporting 40+ unique token types, 20+ abstract syntax node types including 16 modern programming language syntax expressions
- Introduced a recursive descent Pratt Parser to build source code into AST representation
- Wrote unit tests for modular testing across 3 components of the compiler frontend with 100+ unique checks
- Utilized LLVM for backend intermediate representation code generation
- Managed a medium sized codebase solo, writing and debugging 2000+ lines of C++26 code

25lang Interpreter (Ongoing) | Java

Nov. 2024 – Present

- Developed an interpreter for the 25 programming language in Java, featuring a fully functional REPL
- Implemented dynamic type inference and support for basic data types such as INT, FLOAT, BOOL, and NULL
- Allowed mutable variable declarations and updates, enabling operations like $x = x + 1$
- Built a working evaluator that processes and computes expressions dynamically
- Gained experience in interpreter design, language implementation, and Java development

EXPERIENCE

Frontend Developer — ntsunema

Hiroshima University

Apr. 2025 – Aug. 2025

Higashihiroshimashi, Hiroshima

- Maintain and update a professor's personal academic website using React, HTML, and CSS
- Work with the Cuttlebelle static site generator framework to manage content and modular component templates
- Collaborate in a multilingual academic environment, ensuring clarity and usability for both Japanese and English-speaking audiences

Undergraduate Teaching Assistant

Saint Mary's University

Jan. 2024 – Apr. 2024

Halifax, NS

- Supported instruction for 30+ students in a Python-focused programming fundamentals course
- Evaluated assignments, tests, and exams under strict deadlines while maintaining accuracy and fairness
- Delivered actionable, code-level feedback to help students improve logic, structure, and readability
- Collaborated with faculty and upheld academic standards in a fast-paced, detail-oriented environment

Service Learning Engineer, Team Lead

Saint Mary's University

Jan. 2024 – Apr. 2024

Halifax, NS

- Led a team of 4 in creating accessible web pages using HTML and Tailwind CSS for a client with a vision disability
- Organized team meetings, managed time logs, and ensured consistent progress across contributors over 16 weeks
- Oversaw source code integration and provided feedback to maintain clean, functional, and user-friendly design
- Handled all project submissions and ensured on-time delivery of all milestones
- Guided the team to academic success; all members earned an A+ for the project (>90% mark)