Henri Cerio-Cain

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EDUCATION

Dalhousie University   *Halifax*, *NS*
Bachelor of Computer Science   Expected Apr 2027
  Relevant Coursework: Data Structures, Software Development, Operating Systems and Algorithms.

CO-OP STATUS

- Completed 5 of 8 semesters as of summer 2025.
- Seeking a 4-to-8-month work term in summer and winter 2025.

SKILLS

- Advanced in MySQL, JavaScript, HTML, CSS, Java, C, Python and Git.

UNIVERSITY PROJECTS

HenriAI (Late Stages of Development)
Personal Project   Dec 2024
- Developing and fine-tuning a custom conversational AI model using GPT-Neo 1.3B, training on a personalized dataset created to simulate conversations based on my communication style.
- Optimized training efficiency by implementing mixed precision training and gradient accumulation, reducing GPU memory usage by 40% and enabling batch sizes up to 32.
- Developed a dynamic and responsive website using HTML, CSS, and JavaScript, featuring interactive elements and smooth animations for deployment.

Domyn Application (Mid Development)
Personal Project, Founder   Dec 2024
- Leading development of Domyn, a React-based workout app, collaborating with a co-founder to create a user-friendly fitness platform.
- Collaborating with co-founder on UI/UX design and an intuitive and engaging user experience.
- Developing key front-end components and implementing state management solutions to ensure a smooth and responsive user interface.

henriceriocain.ca (Personal Portfolio)
Personal Project   Nov 2024
- Developed a dynamic and responsive personal portfolio using HTML, CSS, and JavaScript, featuring interactive elements and smooth animations to showcase projects, skills and contact information.
- Implemented a "card expansion" feature with smooth transitions for an immersive experience when viewing project details.
- Optimized website performance through code minification and efficient animation implementation for fast loading and a smooth user experience across all devices.

Binary Translator

Systems Programming, Dalhousie University   Apr 2024

- Developed a binary translator in C to convert a 16-bit RISC-based instruction set into x86-64 assembly code.
- Implemented bitwise operations and optimized control structures to enhance translation accuracy and efficiency.

Social Network Friend Recommender: Code Extension, Refactoring, and Unit Testing

Software Development, Dalhousie University   Mar 2024

- Refactored and extended a social network friend recommender system, implementing new features and improving code structure based on SOLID principles.
- Wrote comprehensive JUnit5 tests, increasing code coverage to 95%, and ensured robust handling of user input errors.

Disease Simulator

Data Structures and Algorithms, Dalhousie University   Feb 2024

- Designed and built a disease spread simulation in Java, incorporating object-oriented principles such as inheritance, interfaces, and ADTs to model complex real-world scenarios.
- Optimized simulation performance, reducing runtime by 20% through efficient use of data structures and algorithms.

ACTIVITIES

Dalhousie Computer Science Society   *Halifax, NS*

Member   Sep 2024 – Present

Dalhousie Machine Learning Society   *Halifax, NS*

Member   Dec 2024 – Present

ADDITIONAL

Languages:

- Fluent in French and English.
- Elementary Proficiency in Cebuano.

Certifications & Training:

- New-Brunswick Certificate of Oral Proficiency French as a Second Language: Advanced.
- Passed LinkedIn Skill Assessments in Java, Front-End Development, CSS, JavaScript and HTML.