Caleb Mulugeta

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EDUCATION

Carleton University — Ottawa, ON

B.S Computer Science Honours, Specialization: AI and Machine Learning — *GPA: 3.9/4.0 | Expected: April 2028*

- **Coursework**: Data Structures and Algorithms, Object Oriented Programming (Java), Systems Programming, Web Applications, Software Engineering(C++), Statistics, Pyhon
- **Involvements**: Operation Chair ColorStack-CU, Carleton Computer Science Society Volunteer
- **Awards**: Dean's Honor List, C. Gibson Scholarship

TECHNICAL SKILLS

- Java, Python, C, HTML, CSS, JavaScript, PyTorch, TensorFlow, Git, Node, TypeScript, React, Express, MongoDB

EXPERIENCE

Incoming Software Engineer Intern | Parallel — January 2026

- Will contribute to backend development with a focus on authentication, and currency compatibility using Java and Spring Boot.

Software Engineer Intern | Doro — December 2025

- Working on backend API development using Python, FastAPI, and PostgreSQL. Aswell as Firebase for authentication and database integration.

Software Developer | Carleton Computer Science Society — April 2025 – August 2025

- Developed a reusable, component based layout framework with TypeScript and React, that standardized UI behavior across 10+ production pages and improved reliability for a platform used by over 1,000+ students.
- Refactored an existing TypeScript codebase by replacing multiple page specific headers with a centralized, reusable layout component, eliminating duplicated UI logic by 25% and increasing maintainability.
- Collaborated within a Git based CI/CD environment alongside a 20 member engineering team, contributing to an open source repository, improving software quality through code reviews and test automation.

Teaching Assistant (Java) | Carleton University — September 2025 – Present

- Supported 100+ first year CS students in mastering Java, Object Oriented Programming, interfaces,data structures and algorithmic complexity, improving student comprehension through live code walkthroughs.
- Conducted weekly office hours, providing 10–15 individualized technical debugging sessions focused on compiler errors, logical correctness, and code optimization strategies.
- Assessed 200+ code submissions using grading rubrics. Delivering detailed feedback on correctness, style, documentation, and algorithm choice, ensuring consistency and fairness in assessment.

PROJECTS

Brain Tumor Classifier | *Python, Pytorch, Matplotlib, Torchvision, Jupyter Lab* — November 2025

- Built a convolutional neural network using PyTorch's nn.Sequential API to classify MRI brain images into four tumor types, trained for 25 epochs on the GPU when available.
- Achieved 96% test accuracy, validated through forward pass evaluation, average test loss calculation, and visualization of model predictions and sample MRI images using Matplotlib.

Car Dealership Management GUI | *Java, MVC, OOP, GUI Development* — May 2025

- Engineered an interactive car dealership simulator in JavaFX, featuring live inventory tracking, cart based sales management, and automated revenue analytics.
- Applied Java OOP fundamentals (classes, inheritance, encapsulation) and implemented strict MVC separation between model and GUI logic.