Caleb Mulugeta

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Education

Carleton University — Ottawa, ON
B.S Computer Science Honours, Specialization: AI and Machine Learning — *April 2028*
Coursework: Data Structures and Algorithms, Object Oriented Programming (Java), Systems Programming, Fundamentals of Web Applications — GPA: 3.9/4.0

Experience

Software Developer — April 2025 – August 2025
Carleton University — *Ottawa, ON*

- Improved site maintainability by building a shared layout used across 10+ pages.
- Delivered clean, scalable code in TypeScript, reducing code duplication by 25% and increasing long-term maintainability.
- Collaborated remotely with a team of 20 developers, contributing to open-source projects for the Carleton Computer Science Society.

Teaching Assistant — Sep. 2025 – Present
Carleton University — *Ottawa, ON*

- Supported 100+ first-year students in understanding Java programming concepts including, basic data structures, OOP principles and program efficiency.
- Provided one-on-one guidance during office hours, answering an average of 10–15 student
- Graded and provided detailed feedback on 200+ programming assignments and exams, ensuring consistency and fairness in assessment.

Projects

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

- Developed and trained a convolutional neural network capable of classifying MRI brain images into four tumor categories.
- Implemented data preprocessing and augmentation using a Kaggle brain tumor MRI dataset.
- The model achieved 96% accuracy on unseen test data, showing strong model generalization.

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

- Built an interactive AutoPark 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.
- Designed responsive UI with real-time event handling, enabling users to add/remove vehicles, complete sales, and reset stock with dynamic visual updates.

Technical Skills

Languages: Java, Python, C, JavaScript, HTML/CSS, TypeScript
Frameworks:Node.js, React, Pytorch
Developer Tools: Git, VS Code, Visual Studio, IntelliJ, Eclipse, Jupyter Lab