Aaryan Biradar

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EDUCATION

Carleton University — GPA: 4.0/4.0　　　　　　　　　　　　　　　　　　Ottawa, ON
Bachelor of Science in Computer Science, Minor in Statistics　　　　　　　　　*2024 - 2029*
- – Concentration: Artificial Intelligence and Machine Learning Stream

EXPERIENCE

Software Engineer Intern　　　　　　　　　　　　　　　　　　　　May 2025 – Present
Ciena　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　*Ottawa, ON*
- – Wrote unit tests for 50K+ lines of code in the Core library, improving code coverage and reliability.
- – Automated sanity checks with Jenkins to verify build stability and key feature functionality.
- – Integrated Protocol Buffers to enable efficient serialization; refactored auto-generated code to reduce runtime errors
- – Contributed to testing AI functionalities in production environments, documenting performance insights.

Youth Coding Instructor　　　　　　　　　　　　　　　　　　　　Jan 2024 – Jun 2024
Dovercourt Recreation Centre　　　　　　　　　　　　　　　　　　　　　*Ottawa, ON*
- – Taught introductory Python to 25+ students, emphasizing algorithm design and data structures.
- – Created interactive exercises and coding challenges to reinforce computational thinking.
- – Encouraged students to engage in competitive programming and pursue extracurricular learning.

Program Leader　　　　　　　　　　　　　　　　　　　　　　　Sept 2022 – Jun 2024
Dovercourt Recreation Centre　　　　　　　　　　　　　　　　　　　　　*Ottawa, ON*
- – Led day-to-day programming and supervised youth operations, ensuring safety and crisis response compliance.
- – Planned and executed engaging activities for groups of 50+ participants across age ranges.

PROJECTS

AI Productivity Application | *Python, OpenCV, Pygame, Git*
- – Engineered a real-time distraction detection system using face and eye tracking with OpenCV.
- – Used pynput to track mouse and keyboard inactivity, triggering animated alerts with Pygame.
- – Implemented modular architecture for simultaneous sensor and input monitoring.

AutoPark Management System | *Java, JavaFX*
- – Built an interactive JavaFX desktop app to manage vehicle inventory, cart, and real-time sales data.
- – Implemented object-oriented inventory models and optimized search using sorting algorithms.

University Website Redesign (1st Place, Hackathon) | *TypeScript, React.js, Git*
- – Led a 4-person team to revamp Carleton University's student portal during a 24-hour hackathon.
- – Developed responsive React components and organized app state using hooks and reducers.
- – Used GitHub Projects for issue tracking, PR reviews, and collaboration under tight deadlines.

Line Following Robot | *Arduino, RGB Sensors, Motor Control*
- – Designed a two-wheel robot using RGB sensors for line detection and real-time path correction.
- – Controlled motors with PWM signals and H-Bridge drivers for directional logic.
- – Fine-tuned sensor thresholds and feedback loops for accurate high-speed navigation.

ACHIEVEMENTS

Dean's List, Carleton University Awarded for GPA 4.0.　　　　　　　　　　　2024 - 2025

TECHNICAL SKILLS

Languages: Python, Java, C, C++, TypeScript, JavaScript, HTML/CSS, SQL
Frameworks: React.js, JavaFX, Node.js
Developer Tools: Git, GitHub, Jenkins, VS Code, IntelliJ, PyCharm
Libraries & APIs: OpenCV, Pygame, NLTK, Protocol Buffers
Embedded Systems: Arduino, RGB Sensors, PWM, H-Bridge Drivers