



Ayaan Sethi

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EDUCATION

Toronto Metropolitan University (Formerly Ryerson)

Toronto, Ontario

B. Eng - Computer Engineering (Co-op) - Software Engineering Option

Expected Graduation, May 2026

- **Dean's List:** 2022-2023 and 2023-2024
- **Related Coursework:** Data Structures & Algorithms, Object Oriented Programming, Software Systems, Digital Systems, Database Systems, Signals and Systems, Electronics Circuits, Microprocessor Systems.

PROJECTS

Personal Portfolio Website | *React.js, Tailwind CSS, Framer Motion* | [ayaansethii.com](#)

November 2024

- Created a personal portfolio website to showcase projects, skills, achievements, and hobbies, enhancing personal branding through a dynamic and engaging design.

Posture-Correction AI Application | *Python, Mediapipe, OpenCV*

November 2024

- Developed a full-stack real-time posture correction application leveraging MediaPipe machine learning pipelines and OpenCV, resulting in live camera tracking and user alerts to improve posture during work.
- Designed a posture correction algorithm via ergonomic research, tracking key body points and calculating deviations against predefined thresholds, ensuring accurate real-time feedback.

General Processing Unit | *VHDL, Quartus II*

December 2023

- Accomplished the development of three distinct GPUs, as measured by their ability to perform advanced logic functions and arithmetic operations, by implementing decoders, FSMs, and flip-flops on FPGA.
- Successfully executed operations including parity checking, bit rotation, and input comparisons by optimizing logic gate configurations for enhanced processing efficiency.

Maze tracking E-bot | *Assembly, HCS12 Microcontroller*

November 2024

- Programmed an e-bot vehicle with the HCS12 microcontroller to autonomously navigate a maze, using photo sensors for line tracking, bumper control for obstacle handling, and displaying live states on an LCD.
- Enhanced success rate from **40% to 95%** through rigorous troubleshooting and optimization, leveraging debugging skills to ensure accurate obstacle detection and responsive navigation.

Banking Application | *Java, JavaFX, FMXL Scene Builder*

March 2024

- Produced a comprehensive banking system, measured by the secure handling of banking transactions and administrative controls, by implementing login verification for clients and administrators.
- Enhanced user experience through an intuitive and responsive UI, designed with JavaFX and FMXL SceneBuilder, ensuring smooth interactions and visual appeal.

Dynamic Sketch Pad | *Javascript, HTML, CSS*

June 2024

- Designed a user-friendly sketch pad with customizable grid sizes, improved UI, and various color and eraser options, ensuring an intuitive drawing experience by implementing event-driven controls using JavaScript.
- Managed the project using Git and GitHub repositories, implementing efficient branch management strategies to ensure seamless revision and project completion.

ACTIVITIES AND LEADERSHIP

Metropolitan Undergraduate Engineering Society

Operations Committee

August 2024 - Current

- Responsible for developing and promoting undergraduate engineering initiatives, with a focus on designing and marketing merchandise.

SKILLS

- **Languages:** Java, Python, JavaScript, HTML/CSS, C++, C, SQL, Assembly, VHDL/Verilog, MATLAB
- **Technologies:** Git, Github, Node.js, React.js, JavaFX Scene Builder, Oracle, Multisim, Quartus II, Linux