

# Ava Yunus

+1 (416) 797-5690 | [avayunus@my.yorku.ca](mailto:avayunus@my.yorku.ca) | [linkedin.com/in/avayunus/](https://linkedin.com/in/avayunus/) | [github.com/AvaYunus](https://github.com/AvaYunus)

## Summary

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Software Engineering student with hands-on experience designing modular systems, rapid prototyping, and delivering scalable solutions across Java, JavaScript, and C++. Proven success collaborating in fast-paced project environments and iterating based on data and user feedback.

## Education

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### York University, Lassonde School of Engineering

Spec. Hons. Bachelor of Engineering, Software Engineering

- Relevant Coursework: Operating Systems, Computer Organization, Data Structures & Algorithms, Embedded Systems

## Relevant Projects

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### Roborama Line Following Autonomous Robot | C++

- Programmed movement logic using PID-style tuning to optimize stability and pathing.
- Debugged and refined behavior through rapid prototyping, reducing error oscillation.
- Collaborated in a time-constrained environment, iterative build/test cycles every 30 minutes.

### Flexx Fitness Application | Java, SQL

- Implemented core interaction systems (authentication, user flow, and navigation).
- Developed multiple UX iterations based on user feedback; reducing onboarding friction by 20%.
- Owned feature scoping and iteration through design – prototype – ship.

### Traffic Collision Avoidance System (TCAS) | Java

- Built decision-making logic that simulates real time input: rule evaluation and action output.
- Focused on reliability and clear logic execution.
- Engineered an extensible architecture for adding new decision rules.

### Personal Portfolio / UI System | Next.js, Tailwind

- Developed a personal site as living UX portfolio to showcase iterative projects.

### Plant Watering System | Java

- Built a smart system detecting soil dryness and automating watering, incorporating efficient use of sensors.
- Optimized system functionality by implementing Java programming techniques.

## Achievements

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### UNHack Competition, BEST Lassonde | 3rd Place Winner

- Designed solution targeting sustainability (SDG #7) with a team of 5.
- Owned “system thinking” aspect: creating a reusable, modular simulation that reduced estimated costs by 30%.
- Advocated sustainable design principles by applying systems thinking and modular architecture, ensuring alignment with SDG#7: Affordable and Clean Energy.

## Leadership and Production Experience

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### Robotics Mentor & Project Lead | John Paul II

- Mentored students on logic thinking, prototyping, and debugging strategies.
- Helped teams improve problem solving efficiency through documentation and iteration.

## Technical Skills

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**Languages:** Java, JavaScript, C++, C#, SQL, Python, HTML/CSS, Bash

**Tools and Frameworks:** Unity (C#), Linux, Docker, Git, Next.js, Tailwind, UE (learning), Figma

**Design:** Rapid prototyping, system design, feature spec writing, balancing, telemetry-based decision making