

# Adam Maatouk

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## EDUCATION

### Concordia University

Software Engineering

September 2025 - Present

### Collège de Maisonneuve

Computer Science and Information (Application Development)

August 2022- May 2025

## EXPERIENCE

### Athena AI / Devfortress

Software Engineering Intern

March 2025 – May 2025

Montreal, Qc

- Built and shipped production React and TypeScript features used by live users, improving frontend performance and load times by 35%.
- Refactored component architecture and state management, reducing unnecessary re-renders and improving UI responsiveness by 28%.
- Developed Python-based AI evaluation pipelines to analyze model outputs and identify failure cases, increasing model accuracy by 18%.
- Implemented real-time model tuning and fixes, reducing incorrect or low-confidence AI responses by 22%.
- Diagnosed and resolved production issues using logs and metrics, reducing recurring user-reported bugs by 25%.
- Supported live product demos at World Summit AI, increasing partner engagement and inbound interest by approximately 15%.

## PROJECTS

### Sortify – Intelligent Waste Sorting System with AI | Python, YOLOv5, Raspberry Pi, Arduino

Placed 1st in the 2024 Cohort

- Developed an AI-powered waste classification system using Python and YOLOv5, achieving 92% detection accuracy.
- Designed and integrated embedded hardware using Raspberry Pi and Arduino to enable automated sorting workflows.
- Demonstrated a functional end-to-end prototype at a public fair, validating real-world feasibility and winning first place.

### Better Call Saul AI – ConUHacks IX Winner | React, TypeScript, Vite, AI APIs

- Led a 4-person team to build a full-stack AI-powered legal assistant web application using React, TypeScript, and Vite.
- Integrated speech recognition and translation APIs to enable bilingual voice-based interaction with over 90% accuracy.
- Awarded Hackathon Winner at ConUHacks IX for usability, real-world impact, and product originality.

### Shadow Realm – 2D Hack & Slash Game | Unity, C#

- Developed core combat systems including enemy AI, boss encounters, and player abilities using Unity and C#.
- Improved player retention by refining combat pacing, difficulty curves, and progression systems.
- Implemented custom game logic and state management without external services, emphasizing clean architecture and performance.

### 3D Art Gallery | Unity, C#, Firebase

- Led a 4-person team to build an immersive 3D art gallery using Unity with real-time multiplayer interaction.
- Implemented first-person navigation and exploration mechanics to enhance user immersion and engagement.
- Integrated Firebase-based real-time chat to enable live interaction between concurrent users.

## SKILLS

**Programming Languages:** TypeScript, Python, Java, JavaScript, C#, Dart, SQL

**Technologies:** React, Node.js, Firebase, Flutter, Unity, MongoDB, Git

**Interests:** Full-Stack Development, AI Systems, Mobile Applications, Distributed Systems, Game Development