

# EDREES AMIRI

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## TECHNICAL SKILLS

**Languages/Frameworks:** Python, Java, C, Lua, TypeScript, HTML/CSS, PyTorch, Scikit-learn, React, Node, Flask, Spring Boot, Bootstrap  
**Skills:** PostgreSQL, MySQL, Agile Methodologies, Vite, OAuth, Git, PowerShell, Bash, Linux, Docker, REST APIs, WebSockets, FFmpeg  
**Technology :** Excel, Vercel, Railway, Fly.io, Cohere API, Supabase, Figma, Excel, Windows

## EDUCATION

**Ontario Tech University** Sept. 2023 – 2027  
*Bachelor of Science in Computer Science* Oshawa, ON  
**Relevant Coursework:** Data Structures and Algorithms, Analysis of Algorithms, Computer Architecture, Intro to Programming  
**cGPA:** 3.5

## EXPERIENCE

**ResyncBot (Live Demo)** July 2025 – Present  
*Founder/Developer* Remote

- Built a bot in **Python** used in **130+ Discord servers** by **80,000+ users** to resync music videos by replacing audio while keeping cuts on beat.
- Helped video editors preview edits with different audio tracks, making it easier to visualize timing and unlock new creative ideas.
- Reduced re-syncing time from **30+ minutes** to **30 seconds** using **BPM detection** and **waveform analysis** for automatic alignment.
- Engineered a secure **Flask + PostgreSQL backend** to handle media processing, analytics, user tracking, and payment authentication.
- Built a Discord interface and a **React + Vite demo website** showcasing the tool with a testable music video for editors and creators.

**Ontario Tech Computer Science Club** July 2025 – Present  
*Software Developer* Oshawa, ON

- Delivered a CS Club website for **100+ members** with **99% uptime**, optimizing for scalability using **React, Vite, and Java (Spring Boot)**.
- Reduced feature delivery from **1 week** to **3 days** through **rigorous testing** and **modular design**, ensuring **executive satisfaction**.
- Built a **member registration system** with **database** support, onboarding **50+ members** and enabling **automated updates** on event creation.
- Implemented a **JWT-authenticated admin login system**, ensuring secure access for executives managing events and club data.

**Software Developer** Aug. 2024 – May 2025  
*Freelance* Remote

- Built a custom **Discord bot** for a film studio to manage editor apps, automate moderation, and drive community engagement.
- Integrated features like **text-to-speech voice support**, timed reminders, and smart responses to improve usability for non-technical users.
- Collaborated on a Roblox game (*Aegis*) by scripting in **Lua**, creating NPC behavior, and working alongside a multi-dev team.

## PROJECTS

**NutriDetect - Hackhive X Microsoft Hacathon** February 2025  
*Python, HTML/CSS, JS, Flask, Azure, Cohere API*

- Prototyped an **AI-powered nutrition assistant** in **Python** for tracking intake and giving personalized health suggestions in real time.
- Integrated the **Cohere API** as a chatbot trained with custom prompts to provide tailored diet and nutrient advice based on user deficiencies.
- Delivered a web app with a responsive **HTML/CSS front-end** linked to an AI backend, showcasing its potential to improve daily nutrition.

**Handwritten Alphabet Recognizer** July 2025  
*Python, PyTorch, NumPy, Scikit-learn, Neural Networks*

- Built a **neural network** from scratch in **NumPy**, coding backpropagation, activation functions, and gradient descent to learn fundamentals.
- Rebuilt and optimized the model in **PyTorch**, achieving **99% accuracy** on the MNIST dataset through tuning and evaluation.
- Gained hands-on experience with **deep learning** concepts such as weight initialization, ReLU/Softmax activations, and loss functions.

**Image Filtering Program** August 2024  
*C, Makefile, Sobel Filter, CLI Tools, BMP File Handling*

- Built image filters in **C** to apply grayscale, blur, edge detection, and flip effects on 24-bit BMP files with **pixel-level** precision.
- Implemented the **Sobel algorithm** to detect edges by calculating gradient magnitudes across neighboring pixels.
- Created a flexible **CLI tool** with user-selectable flags for applying filters and saving the processed image to disk.
- Managed compilation with a custom **Makefile**, organizing the codebase into modular, maintainable source files.