SEIF OTEFA

647-904-5288 | seifotefa@gmail.com | linkedin.com/in/seif-otefa | github.com/seifotefa | seifotefa.com

EDUCATION

McMaster University September 2024 - April 2028 *(Expected)*
Bachelor of Applied Science, Honors Computer Science Co-op *GPA: 3.6/4.0*

WORK EXPERIENCE

Software Engineer Intern — *Ludera* *October 2025 – Present*
- Built an AI flashcard generation pipeline using **spaCy** for NLP preprocessing, **PyMuPDF** for PDF and Markdown extraction, and Python for handling raw text, enabling conversion of diverse note formats into clean, structured data.
- Implemented embeddings and semantic search using vector databases **(pgvector)** to store and retrieve chunked note sections, ensuring accurate context-aware flashcard generation.
- Prototyped and tested lightweight open-source **LLMs (7B–13B)** from Hugging Face for Q&A generation, improving note-to-flashcard throughput to process **100+ chunks** per hour while maintaining high-quality outputs.

Robotics Instructor — *O'Botz Robotics* *July 2025 – Present*
- Taught robotics, electronics, and programming to **10 students** of various ages and skill levels through hands-on robot assembly, coding exercises, and troubleshooting activities.

Business Analyst Intern — *WoulibX Inc.* *July 2025 – September 2025*
- Conducted end-to-end market and UX research on ridesharing and on-demand platforms, analyzing competitors, user journeys, and growth trends to inform product design and positioning.
- Developed strategic frameworks including market gap analysis, user personas, value propositions, and AI-driven feature concepts, while building risk/opportunity models to guide data-backed go-to-market decisions.

Product Manager Intern — *MoVA Realities* *March 2025 – May 2025*
- Led a cross-functional **team of 4** to define an MVP framework for an AI-powered immersive platform, producing a **30-page requirements analysis report** outlining **21** core features.
- Created detailed technical documentation, UI/UX mockups, and stakeholder presentations ensuring clear alignment on deliverables and milestones.
- Developed a **27-week phased roadmap** reducing expected development time by **20%** and a comprehensive system architecture design **mapping 15+ components**, including AI services and cloud infrastructure.

LEADERSHIP EXPERIENCE

Teaching Assistant — *Stanford University* *April 2025 – May 2025*
- Facilitated weekly **CS106A** sessions for **15+ students**, providing hands-on support in **Python**, **Karel**, and **Tkinter** to reinforce programming fundamentals, control flow, graphics, and data structures.

PROJECTS

Spark and Prepper – AI-powered Study Assistant Platform
React, Tailwind CSS, Node.js, Express.js, Google Gemini API, Firebase
- Led a team of 3 at **GDSC Hacks 2025** to build a full-stack AI study app that generates flashcards, quizzes, and study guides from up to a **100 pages** of material in under **10s**, using **Gemini API, Node.js, Express, React, and Firebase.**

ResuMock – Personalized Mock Interviewing Platform
React, Tailwind CSS, Node.js, Express.js, Google Gemini API
- Led a team of 4 to build **ResuMock** at **DeltaHacks Lite** in under **1.5 hours**, a web application built using the **Gemini API** with a **Node.js** and **Express** backend to simulate a personalized behavioral interview based on uploaded resumes, and analyze user answers using AI.

BookMate – Full Stack Appointment Booking App
JavaScript, PHP, MySQL
- Collaborated with a team of 3 to build a full-stack appointment booking platform using **PHP**, **MySQL**, and **JavaScript**, featuring authentication, admin dashboard, session management, and real-time calendar updates via **AJAX and FullCalendar API**.

TECHNICAL SKILLS

Languages: Python, HTML, CSS, C, SQL, Java, JavaScript, TypeScript, PHP, Bash, Latex, Haskell
Frameworks/Libraries: React, Node.js, Tailwind CSS, spaCy
Developer Tools and Databases: Apache, Firebase, Git, Github, MySQL, PostgreSQL, Makefile, Unix, Visual Studio Code
Other Skills and Concepts: MS Office, Canva, Figma, Agile, CI/CD, UX/UI, REST APIs, OOP