

# Farah Mohamed

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## EDUCATION

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### Université de Montréal

Computer Science (B.Sc.)

Montréal, QC

2022 – 2025

## EXPERIENCE

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### Software Analyst and Developer Intern

CAE Inc.

March 2026 – April 2026

Montreal, QC

- Developed a virtual reality aircraft cockpit simulator using Unity, C#, and Meta XR SDK.
- Created an AI agent capable of interacting with simulator systems and generating real-time voice responses using wit.ai and Gemini.
- Presented the project and authored technical documentation for the source code.

### Security Analyst

Canada Revenue Agency (CRA)

July 2024 – June 2025

Ottawa, ON

- Analyzed security risks of software and created accounts to approve or deny requests for additional permissions.
- Consulted directly with requesters to clarify security requirements and gather critical information for rigorous risk assessments.

## PROJECTS

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### AI visibility tool | *Next.js, React.js, TypeScript, Tailwind, Firecrawl, Google GenAI*

[Github](#) | [Site](#)

- Implemented a research-first grounding pipeline that leverages the Google Search tool within the Google GenAI SDK to retrieve and deterministically rank the top 50 real-world business entities for a given optimization query, eliminating hallucinated visibility scores.
- Developed a production-grade web scraping pipeline using Firecrawl that converts raw web content into clean, LLM-ready Markdown format, ensuring reliable extraction and semantic analysis of schema markup and HTML elements.
- Built an automated audit system that generates JSON-formatted recommendations with copy-paste implementation fixes to directly enhance search engine visibility.

### Finance Management App | *Python, FastAPI, React, JavaScript, HTML, CSS, Gemini AI*

[Github](#) | [Site](#)

- Developed a RESTful API backend using Python and FastAPI to automate bank statement parsing.
- Integrated Google Gemini AI API with custom prompt engineering to automatically categorize transactions.
- Developed a responsive dashboard using React, TypeScript, HTML and Tailwind CSS that displays spending summaries and lets users search and edit categories, providing real-time financial insights.
- Containerized the backend with Docker for deployment on Railway and hosted the frontend on Vercel.
- Implemented client-side caching to improve user experience with instant data retrieval.

### AI Inbox Firewall | *Python, Django, React, Solace Agent Mesh, PostgreSQL, Redis, Docker*

[Github](#) | [Demo](#)

- Developed an intelligent email inbox featuring a 6 specialized AI agents architecture utilizing Solace Agent Mesh.
- Built a user interface using React to monitor asynchronous agent workflows and display live inbox status updates.
- Orchestrated the full-stack environment using Docker Compose to containerize Django REST API, React, Solace PubSub+, PostgreSQL, and Redis.

### Collaborative Whiteboard | *Next.js, React.js, JavaScript, HTML, CSS*

[Github](#) | [Site](#)

- Developed a Full Stack real-time collaborative whiteboard application allowing multiple users to draw and interact simultaneously.
- Implemented secure authentication with Clerk and real-time synchronization with Liveblocks.
- Utilized Convex as a reactive database and server-side functionality running on the Node.js runtime via Next.js for a modern and high-performance web architecture.

## TECHNICAL SKILLS

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**Programming Languages:** Python, Java, SQL, TypeScript, JavaScript, Haskell, C, C++, Scheme, Swift, Gambit

**Frameworks:** Next.js, React, NumPy, PyTorch, Node.js, Three.js

**Developer Tools:** Git, VS Code, Visual Studio, Docker, Microsoft 365 suite, Figma, Miro

**Languages:** French (Native), English (Fluent), Spanish (Conversational)