ELYES RAYANE **MELBOUCI**

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WWW: https://www.melboucierayane.com/

Skills

- PyTorch
- HuggingFace
- Numpy
- Pandas
- Scikit-Learn
- Snowflake
- AWS
- Azure

- SQL
- Python
- Java
- Html & CSS
- React
- Typescript
- Linear Algebra , Vector Calculus & *Probability and Statistics*

Experience

Business Intelligence Developer   03/2022 to Current
CN Investments Division   **Montreal, Quebec**

- **Data Preparation:** Optimized data workflows using Snowflake AI/ML frameworks, creating vector stores and preparing data for RAG and AI systems.
- **AI Solution Design:** Developed AI solutions for data embedding and search systems. Streamlined data scraping for AI use and advised teams on AI use cases.
- **Automation:** Automated data governance with fine-tuned open-weight models, classifying assets and completing the enterprise glossary, achieving in 1 month with AI-powered agents what would have taken 2 years manually.
- **Data Infrastructure & BI:** Built scalable pipelines and AI-driven analytics using Snowflake, Azure, and AWS to deliver actionable insights.
- **Collaboration:** Partner with stakeholders to align AI models and analytics with organizational goals, delivering impactful, data-driven solutions.

IT Support Specialist   03/2021 to 03/2022
CISSS   **Longueuil, Quebec**

- Created & managed SQL Databases for inventory.
- Documented and streamlined repair processes.
- Implemented solutions for automated tasks
- Identified hardware issues using diagnostic tools.
- Configured computers, drivers, and peripherals.
- Assisted users with troubleshooting.
- Explained tech details to diverse users.
- Monitored equipment for swift responses.

Education and Training

Bachelor of Engineering: **Software Engineering**   **Expected in 06/2027**
École De Technologie Supérieur   Montreal, QC

DEC : Network And Security Architecture: **Information Technology**   **04/2022**
Maisonneuve College   Montreal, QC

Languages

English: ▰▰▰▰▰▱

Full Professional

French: ▰▰▰▰▰▰

Native/ Bilingual

Arabic: ▰▰▰▰▰▰

Native/ Bilingual

Kabyle: ▰▰▰▱▱▱

Professional

Projects

- **Ingen-IA**
  Dec. 2024
  Developed Ingen-IA, an AI-powered assistant that enhanced autonomous learning by explaining concepts clearly and adding a dynamic vocal dimension. Expanded the project to create 124 tailored AI agents for different courses by collecting public syllabi, structuring data, and designing specialized agents.
  Focused on ethical AI development, ensuring data privacy and confidentiality while integrating features like authentication, database management (Supabase), AI development (OpenAI, ElevenLabs), web scraping (BeautifulSoup, Selenium), and payment integration (Stripe).
  Skills: OpenAI, ElevenLabs, Supabase, Selenium, BeautifulSoup, Stripe Integration, Authentication, Database Management.

- **reMind**
  Dec. 2023 – Present
  Developed reMind, an AI that tracks and summarizes digital activities locally and privately, storing data in a vector database. Users can ask questions like "Summarize my day on February 24th" or "Where did I find the solution to this error?" with responses powered by embeddings and advanced indexing functions.
  Skills: Python, SQL, Automation, HuggingFace, Ollama, ChromaDB, NLLanguage, LangChain, PyQt, Finetuning, Embedding, API Development, Selenium, Beautiful Soup, SQLite, Swift.

- **Helpdesk AI**
  Sept. 2023 – Nov. 2023
  Implemented an AI model for HelpDesk ticketing, leveraging HelpDesk APIs and a locally trained AI to improve IT support efficiency and response times.
  Skills: Python, Scraping, Artificial Intelligence (AI), Mistral, Llama2, OpenAI, JSON, API Development.

- **MigrAI**
  July 2023 – Sept. 2023
  Developed MigrAI, a software providing three tools to assist individuals with the Canadian immigration process, offering 24/7 guidance for a seamless and accessible experience.
  Skills: Artificial Intelligence (AI), Next.js, React.js, TypeScript, API Development, OpenAI, Finetuning, Embedding, Multi-Factor Authentication, SQL, JavaScript.

- **Tricots Melbouci**
  Jan. 2024 – Mar. 2024
  Developed the website for my family textile company in Montreal, **Tricots Melbouci**, featuring a dynamic and visually appealing landing page. Built with modern technologies like Next.js, React, TypeScript, Tailwind CSS, and Three.js.
  Skills: Next.js, React.js, JavaScript, HTML, Tailwind CSS, Three.js.

- **TireSwift**
  Jan. 2024
  Developed a web application utilizing ClerkJS for authentication and a Python API with a reservation algorithm to optimize schedules. The application allows administrators to log in and access tailored schedules.
  Skills: Python, Flask, Tailwind CSS, Next.js, React.js, TypeScript, SQL, Multi-Factor Authentication.

- **CVPro**
  Oct. 2023
  Built a system that scrapes job requests from databases and processes them in a database. For each

job, an AI (powered by Mistral or OpenAI) analyzes the user's CV and generates a personalized cover letter, highlighting strengths, weaknesses, and a complete personal analysis. Processes up to 100 jobs in 2-5 minutes.

Skills: Python, Scraping, Artificial Intelligence (AI), HTML, Selenium, SQLite, Beautiful Soup, LangChain, Pinecone, PyQt, PyAutoGUI.