

Gabriel Hardy-Joseph

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EDUCATION

HEC Montréal

2021 – 2026

Honours Bachelor's of Business Administration – Business Analytics and Finance

GPA : 3.6/4.3

- Relevant coursework : Data Science, Python, Analytics, Linear Algebra, Linear Optimisation, Statistical Modeling.

Sogang University

2023

Student Exchange Program – Seoul, South Korea

GPA : 3.7/4.3

- Member of the Taekwondo and running clubs, represented the university at the Seoul Shinmun Half-Marathon.

EXPERIENCE

HEC Montréal | Intern, Research Assistant

May 2025 – Present

- Developed **machine learning** models using eye-tracking features to classify cognitive load, achieving **80%** accuracy.
- Granted **NSERC Undergraduate Research Award**, for research in natural sciences and engineering (**\$7,500**).

HEC Montréal | Teaching Assistant

Aug. 2025 – Present

- TECH 20704 : **Python Programming Essentials**. Graded student work and led weekly consultation sessions.

IBM | Intern, Business Analyst

Jan. 2024 – Dec. 2024

- Integrated **product analytics** into IBM offerings through research and functional requirements development.

TMX Group | Intern, Business Analyst

Sep. 2022 – Dec. 2022

- Analyzed **financial data** from approved participants to detect manipulative trading practices.

PUBLICATIONS

Hardy-Joseph, G., Bélanger, C., Karan, A. J., Coursaris, C., Sénécal, S., Leger, P. M., & Rolon-Mérette, T.

Detection of Cognitive Load Using Eye Tracking and Machine Learning in the N-Back Paradigm. *Abstract presented at the NeuroIS workshop of America's Conference on Information Systems 2025 Conference*, Montréal. [In preparation]

Bélanger, C., **Hardy-Joseph, G.**, Karan, A. J., Coursaris, C., Sénécal, S., Leger, P. M., & Rolon-Mérette, T. A Deep Learning Approach for Detection of Visual Inhibition Using Eye Tracking and the Anti-Saccade Paradigm. *Abstract presented at the NeuroIS workshop of America's Conference on Information Systems 2025, Montreal*. [In preparation]

PROJECTS

EquityLens: AI-based Financial News Analysis | Python, LangChain, OpenAI API, AWS ECS, Docker, Streamlit

- Leveraged **LangChain**, **OpenAI API**, and **RAG** to build a tool for automated news article summarization.
- Developed **FAISS**-based vector search with **NLP** and **Newspaper3k** for automated retrieval and quote extraction.
- Deployed **Streamlit** on **AWS ECS Fargate** with a CI/CD pipeline (CodePipeline, Docker-ECR) and **Terraform**.

PremierPredict: Football Match Predictor App | Python, XGBoost, Streamlit

- Trained an Extreme Gradient Boosting machine learning model to predict the outcomes of *Premier League* matches.
- Created an interactive web application using **Streamlit** which allows users to predict outcomes of upcoming matches.

EXTRACURRICULAR

HEC International Case Competitions Team | Academic Delegate

Feb. 2022 – May 2025

- Nine podium finishes in eleven case competitions, including three international (USA, Netherlands, Thailand).

HEC Data Science Committee | Competitions Vice President

May 2024 – Apr. 2025

- Led the *DéfIA 2025* competition with the CDPQ, conducting 40+ interviews and forming the top two winning teams.

HEC Trading Club | Executive Vice President

May 2022 – Apr. 2024

- Occupied a leadership position and was responsible for managing the club's projects, events, image and partnerships.

SKILLS

Tools: Python, SQL, R, Tableau, PowerBI, Posit, AWS, Terraform, Docker, LaTeX, VS Code, Github, Excel.

Libraries: LangChain, Scikit-Learn, FAISS, Newspaper3k, NLTK, OpenAI API, Gym, Pandas, NumPy, Streamlit.

Languages: Fluent in written and spoken French and English.

Certifications: Stanford ML Specialization, Microsoft Azure AI Fundamentals, Bloomberg Market Concepts.

Interests: Long-course triathlon, marathon swimming, bikepacking, boxing, graphic design, language learning.