Gabriel Hardy-Joseph

In LinkedIn **\'>** Website **\(\mathbf{O}\)** Github

EDUCATION

HEC Montréal 2026 – 2027

Master of Science – Data Science and Business Analytics [Incoming]

HEC Montréal 2021-2025

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

- Relevant coursework: Data Science, Python, Analytics, Linear Algebra, Linear Optimisation, Statistical Modeling,
- Student Exchange Program: Sogang University (Seoul, South Korea).

EXPERIENCE

HEC Montréal | Intern, Research Assistant

May 2025 – Present

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- $\bullet \ \ \text{Developed machine learning models using eye-tracking features to classify cognitive load, achieving 80% accuracy.}$
- 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.

 ${f IBM} \mid \mathit{Intern}, \, \mathit{Business} \, \mathit{Analyst}$

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., Karran, 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 Neurol's workshop of America's Conference on Information Systems 2025 Conference, Montréal. [In preparation]

Bélanger, C., **Hardy-Joseph, G.**, Karran, 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 NeurolS 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, Snowflake, Tableau, PowerBI, AWS, Terraform, Docker, LaTeX, VS Code, Git, 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.