

Gabriel Hardy-Joseph

 [LinkedIn](#)  [Website](#)  [Github](#)

Email : gabriel.hardy-joseph@hec.ca

Mobile : +1 (819) 213-6285

EDUCATION

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- 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, Business Analytics, Applied Mathematics, Statistical Modeling.
 - Student Exchange Program : Sogang University – Seoul, South Korea.



EXPERIENCE

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- 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

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- 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

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- 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

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- 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

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- 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.