# Gabriel Hardy-Joseph

LinkedIn **\'\>** Website **\(\Omega\)** Github

**EDUCATION** 

HEC Montréal 2026 – 2028

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

HEC Montréal 2021 – 2025

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

GPA: 3.6/4.3

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- Relevant coursework: Data Science, Python, Business Analytics, Applied Mathematics, Statistical Modeling.
- Student Exchange Program: Sogang University Seoul, South Korea.

### EXPERIENCE

HEC Montréal | Intern, Research Assistant

May 2025 – Present

- $\bullet \ \ {\rm Developed} \ \ {\bf machine} \ \ {\bf learning} \ \ {\rm models} \ \ {\rm using} \ \ {\rm eye-tracking} \ \ {\rm features} \ \ {\rm to} \ \ {\rm classify} \ \ {\rm cognitive} \ \ {\bf load}, \ \ {\rm achieving} \ \ {\bf 80\%} \ \ {\rm accuracy}.$
- 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., 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 NeuroIS 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 NeuroIS workshop of America's Conference on Information Systems* 2025, *Montreal*. [In preparation]

## Extracurricular

#### HEC International Case Competitions Team | Academic Delegate

Feb. 2022 – May 2025

- Garnered 9 top-three podium placements and 3 jury's favorite awards across 11 undergraduate case competitions.
- Represented the university at three international business case competitions (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.

#### **PROJECTS**

## 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.

## Frozen Lake Stochastic Reinforcement Learning Agent 🗹 | Python, NumPy, Gymnasium

- Implemented Q-learning algorithms for stochastic environments using NumPy matrix operations.
- Authored a technical blog post documenting methodology, results, and insights from the project.

#### SKILLS

Tools: Python, SQL, Snowflake, Tableau, PowerBI, LaTeX, VS Code, Tensorboard, PowerPoint, Excel, Git, Github. Libraries: Pandas, NumPy, Matplotlib, Scikit-Learn, PyTorch, Pytesseract, Gym, Stable Baselines, Pynput, Streamlit. Languages: Fluent in written and spoken French and English.

Certifications: Stanford Machine Learning Specialization, Microsoft Azure AI Fundamentals (AI-900).

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