Gabriel Hardy-Joseph

in LinkedIn Website Github

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EDUCATION

HEC Montréal Expected Graduation: Dec. 2025
Honours Bachelor's of Business Administration – Business Analytics and Finance
- Member of the International Case Competitions Team (Competed in: United States, Netherlands and Thailand).
- Relevant coursework : Data Science, Python Programming, Business Analytics, Web Analytics, Statistics.

Sogang University Mar. 2023 – Jun. 2023
Student Exchange Program – Seoul, South Korea
- Member of the Taekwondo and running clubs, represented the university at the Seoul Shinmun Half-Marathon.

EXPERIENCE

Tech3Lab · HEC Montréal | *Intern, Research Assistant* May 2025 – Present
- Developed and trained PyTorch-based neural network models to analyze physiological indicators for cognitive load prediction, under the supervision of Prof. Thaddé Rolon-Merette.
- Granted NSERC Undergraduate Research Award supporting full-time research in natural sciences and engineering.

IBM | *Intern, Business Analyst* Jan. 2024 – Dec. 2024
- Advised senior leadership on Go-to-Market strategies for IBM's Open Payments Marketplace by conducting market and industry research, analyzing competitors, building consolidated slide decks, and delivering presentations.
- Conducted client-centric research on North American independent software vendors and financial institutions.
- Integrated product analytics into IBM offerings through research and functional requirements development.

TMX Group | *Intern, Systems & Data* Sep. 2022 – Dec. 2022
- Analyzed financial data from approved participants to detect manipulative trading practices.
- Developed a training program aiming to educate new employees about financial markets and regulatory concepts.
- Researched new tools to improve and automate the division's processes through Jira and Confluence.

EXTRACURRICULAR

Data Science Committee | *Competitions Vice President* May 2024 – Apr. 2025
- Led a data-driven competition with the CDPQ, conducting 40+ interviews and forming the top two winning teams.

University of Florida ↗ | *Heavener International Case Competition – 2nd Overall and First Divisional* Feb. 2025
- Competed against 15 teams from prestigious universities worldwide, formed and presented strategic recommendations for the digitization of a global remittances company and the applications of VR technologies to treat chronic illnesses.

Jeux Du Commerce | *Information Technology Case – 2nd Overall and Favorite of the Jury* Jan. 2025
- Participated in weekly resolutions of 20+ IT-focused business cases, presenting in front of professors, coaches and various industry leaders to represent the university at the largest business case competition in Eastern Canada.

Deloitte | *Community Case Competition (DC3) – First Overall* Nov. 2023
- Formulated and presented recommendations to guide a non-profit through the process of technology integration.

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.
- Engineered robust features from 25 years of match data including team form, statistics and historical matchups.
- 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.
- Analyzed performance across episodes, revealing optimization patterns in uncertain environments.
- Authored a technical blog post documenting methodology, results, and insights from the project.

SKILLS

Tools: Python, SQL, LaTeX, TensorBoard, Tableau, PowerBI, Visual Studio Code, PowerPoint, Excel, Git, Github.
Libraries: PyTorch, Pandas, NumPy, Matplotlib, Scikit-Learn, Pytesseract, Gym, Stable Baselines, Cvxpy, Streamlit.
Languages: Fluent in written and spoken French and English.
Certifications: Hugging Face Deep Reinforcement Learning Course, Stanford Machine Learning Specialization.