

Guillaume Genois

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EDUCATION

Master's Degree in Machine Learning <i>Mila - Quebec Artificial Intelligence Institute</i>	2025 – Present <i>Montréal, QC</i>
Bachelor's Degree in Mathematics and Computer Science <i>Université de Montréal</i>	2022 – 2025 <i>Montréal, QC</i>

Awarded excellence scholarships and research fundings

PROFESSIONAL EXPERIENCE

Cloud and AI Solutions Advisor <i>Travel Direct Group</i>	Jun. 2025 – Present <i>Montréal, QC</i>
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- ❖ Deployed 80+ websites using Azure cloud infrastructure with Front Door, CDN, and App. Gateway
- ❖ Assisted clients with DNS modifications, providing guidance and support for website deployments
- ❖ Worked with Kubernetes containerization and WordPress Multisite CMS for scalable solutions
- ❖ Identified system bugs and coordinated resolution with external partners for Meta API integrations
- ❖ Led technical review of new AI-powered virtual assistant project for personalized offers
- ❖ Demonstrated flexibility, proactivity, and strategic insight to diverse tasks within a small-business
- ❖ Represented Travel Direct Group during and after the ALL IN AI conference, initiating conversations with multiple AI firms and driving the first phase of partner discovery

Data Engineering Advisor <i>Desjardins</i>	May 2024 – Apr. 2025 <i>Montréal, QC</i>
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- ❖ Developed a Python parser to extract field usage and sources from SQL and SAS queries
- ❖ Automated data traceability, reducing manual impact analyses time from days to minutes
- ❖ Contributed to multidimensional model development using CI/CD practices
- ❖ Implemented modernization solutions with Azure DevOps and SQL Server integration
- ❖ Worked in Agile methodology within large organizational structure

System Pilot <i>Québec Office of the French Language, Government of Québec</i>	May 2023 – Apr. 2024 <i>Montréal, QC</i>
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- ❖ Extracted and analyzed data using SQL programming for accountability reports
- ❖ Responded to internal and media requests with data-driven insights
- ❖ Coordination between internal clients and the IT team to resolve and validate system issues
- ❖ Quickly learned Microsoft Access, Power BI, and internal organizational tools

Badminton Coach <i>Badminton Lachine Club, Lachine, QC</i>	2020 – 2023
Kitchen Assistant <i>L’Oeufrier, Lachine, QC</i>	2022
Clinic Assistant <i>Dorval Podiatric Clinic, Dorval, QC</i>	2021

PROJECTS

Smart Grid Demand Response Optimization | JAX, Model Predictive Control, Time-Series Forecasting

- ❖ Modeled building thermal dynamics using RC networks with Kalman filtering on Hydro-Québec data
- ❖ Implemented MPC-based heating optimization to minimize electricity costs while maintaining comfort
- ❖ Achieved a 19.3% peak demand reduction through staggered pricing, flattening rebound effects

RAG-Powered Cruise Booking Assistant | LangChain, Groq, ChromaDB, Hugging Face

- ❖ Built hybrid RAG system combining SQL database queries with vector similarity search
- ❖ Implemented React agent to orchestrate multi-tool workflows with conversation memory
- ❖ Deployed production web application with Gradio interface and nginx on rag.guillaume.genois.ca

Metadata Curation to Evaluate the Use of LLMs in SLRs | RPA, HTML Parsing, Dataset

- ❖ Built automated application to extract over 30,000 scientific articles from 8 major academic databases
- ❖ Developed custom HTML parser to systematically extract metadata from research publications
- ❖ Designed 16 usable datasets for LLM evaluation research on systematic literature review acceleration

TECHNICAL SKILLS

Machine Learning: Python, RL, MPC, RAG, Agentic, PyTorch, TensorFlow, JAX, Scikit-learn

Data & Software Engineering: SQL, SAS, Matlab, Azure, Docker, Kubernetes, CI/CD

Strategy & Advisory: Business–AI Translation, Executive Communication, Governance, ROI Evaluation

OTHER INTERESTS

Competitive Badminton Player

For Badminton Lachine Club and for fun

2012 - Present

Lachine, QC

Volunteer for Harvest and Other Activities

Vignoble Aux Volets Noirs

2015 - Present

Très-Saint-Sacrement, QC

Non-Profit Organization's Website Maintenance and Modernization

Club des personnes handicapées du Lac St-Louis

2023 - Present

Lachine, QC

Volunteer for Carlisopen Golf Tournament supporting Fondation En Coeur

Lac-St-Joseph Golf Club

2023 - 2024

Québec, QC

REFERENCES

Available upon request