

WILLIAM GLAZER-CAVANAGH

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[Website](#) [Website](#) [LinkedIn](#) [GitHub](#)

EDUCATION

University of Montréal - Professional Masters in Machine Learning [\[link\]](#)

September 2022 - December 2023

Accepted in the MILA program

Montreal, Quebec

Course Work: Data Science, Advanced Algorithms, Reinforcement Learning, Deep Learning, Machine Learning.

Polytechnique Montréal - Bachelor in Software Engineering [\[link\]](#)

September 2017 - May 2022

Artificial Intelligence & Data Science - 3.43 / 4.00 GPA

Montreal, Quebec

Capstone project: Created a platform for automatic article generation of news articles for the journal Le Devoir using OpenAI's GPT-3. Lead an exhaustive requirements review to explore ethical concerns and veracity of the generated content.

WORK EXPERIENCE

Intact - Intact Lab [\[link\]](#)

May 2022 - August 2022

Data Science Intern

Montreal, Quebec

Optimization and evaluation of call center processes across Canada.

Python, LightGBM, SimPy, Pandas, NumPy, PowerBI, SQL, Matplotlib

- Increased yearly call center sales by an estimated 200K\$ by implementing employee management strategies in production. Reviewed impacts with various stakeholders by using our custom discrete event simulator.
- Detected production issues by developing dashboards, ETL pipelines and A/B tests to monitor our models.
- Found and fixed anomalies in our tree-based model by analyzing features and their impact on predictions.

Croesus - Research & Development [\[link\]](#)

May 2021 - August 2021

Research Intern, Artificial Intelligence

Montreal, Quebec

Natural language processing (NLP) research project to automatically explain stock price history from news articles.

Docker, Python, Flask, Argo WorkFlows, PyTorch

- Autonomously identified avenues of research by assessing the state of the art in knowledge injection with knowledge graphs for NLP algorithms. Discussed interesting findings with principal researcher to establish a research agenda.
- Improved generated text's ROUGE score by 5% by integrating two recently published NLP algorithms to our ML pipeline.
- Increased experience reproducibility and speed by 15% by refactoring and re-designing the algorithm evaluation pipeline.

Merck - Quantitative Sciences & Business Intelligence [\[link\]](#)

January 2021 - May 2021

Data Engineer Intern

Montreal, Quebec

Development of Merck Canada's internal ETL (extract, transform, load) processes for Business Intelligence.

Python, AWS (S3/Glue/Lambda), Pandas, SQL, Seaborn

- Produced first insights on GARDASIL-9 HPV vaccine's by leading a market opportunity analysis. This project is currently being used to power a canada-wide marketing and awareness campaign against HPV.
- Automated Merck Canada's manual ETL workloads and reduced delays by two days on average with data ingestion.

PROJECTS & PUBLICATIONS

IVADO - Deep Learning Essentials [\[link\]](#)

December 2019 - February 2020

Scientific Assistant

Montreal, Quebec

Proofread content on the IVADO/MILA online Deep Learning class covering: CNNs, GANs and RNNs

Polytechnique Montreal - MCIS Lab [\[link\]](#)

May 2019 - September 2019

Research Intern

Montreal, Quebec

Analyzed GitHub repositories to extract insights on best practices for open source Machine Learning models from a software engineering standpoint. The paper *Towards a Change Taxonomy for ML Systems* [\[link\]](#) was accepted at EMSE [\[link\]](#).

PROGRAMMING SKILLS

Languages: Python, C/C++, Java, JavaScript, Julia

Backend: Node.JS, Express.JS, Flask

Others: GIT, AWS, Linux, Bash, LaTeX, Docker

Data Handling: SQL/NoSQL, Pandas

Machine Learning: Scikit-Learn, PyTorch, NumPy

Data Visualization: PowerBI, Matplotlib, Seaborn, D3.JS