

Mo Malekpour

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EDUCATION

Master of Applied Science in Computer Engineering <i>Polytechnique Montreal</i>	2023 – 2025
• Courses: Engineering AI Software Systems, Representation Learning, Advanced Concepts of Cloud Computing	GPA: 4.0/4.0
• TA: Files and Databases	
Bachelor of Science in Computer Science, minor in Economics <i>AmirKabir University of Technology</i>	2017 – 2022
• TA: Fundamentals of Programming, Advanced Programming, Principle of Software Design, ML, Data Science	last 2 yrs GPA: 3.6/4.0

WORK EXPERIENCE

Graduate Research Assistant <i>Mila - Quebec Artificial Intelligence Institute</i>	08/2023 – Present
• Member of Data & AI Systems (DAIS) group, focusing on optimizing Text-to-SQL and Data Systems.	
• Developed an end-to-end Text-to-SQL pipeline powered by an LLMs, aimed at reducing latency and costs.	
• Enhanced Text-to-SQL benchmarking by introducing relaxed metrics and join-graph augmentation techniques.	
Data Analyst <i>Divar</i>	02/2022 – 11/2022
• Designed and implemented a company-wide KPI tracking system as the single source of truth in the core Business Insight team, calculating 50+ fine and coarse grained performance metrics for Divar's e-commerce platform with 30M+ monthly active users, enabling informed decision-making across the organization.	
• Built and maintained 20+ production-grade ETL pipelines using Python, SQL, PySpark, Hadoop HDFS, Apache Airflow, and Metabase to power advanced analyses, uncover operational inefficiencies, reveal trends, and deliver actionable dashboards and predictive models.	
Software Engineer Intern <i>Segmentino</i>	06/2020 – 09/2020
• Designed and developed <i>mslib</i> (Microservices Library), a Python SDK delivering core microservices for Segmentino's marketing automation platform, improving integration speed and reducing development overhead.	
• Built <i>enlib</i> (Engine Library) for the journey-designer backend to transform user-created marketing workflows into dynamic DAGs, leveraging Airflow and Docker for scalable and efficient journey orchestration.	
Software Engineer Intern <i>Institute for Research in Fundamental Sciences (IPM)</i>	06/2019 – 09/2019
• Improved data infrastructure in the Technical Development Division of the National Observatory.	
• Redesigned the MySQL weather database and built Flask APIs to streamline data workflows for R&D teams.	

TECHNICAL SKILLS

Programming & Scripting: Python, C/C++, SQL, Bash

Data Eng & DBs: Apache Airflow, Apache Spark (PySpark), PostgreSQL, DuckDB, Query Optimization

Backend & APIs: FastAPI, Flask

Cloud & DevOps: AWS (EC2, Lambda, CloudWatch), Docker, Git

Machine Learning: NumPy, Pandas, Scikit-Learn, PyTorch, Hugging Face, Model Fine-Tuning, RAG, Agentic AI

BI & Visualization: Matplotlib, Seaborn, Plotly, Streamlit, Metabase

PUBLICATIONS

SQLMorph: Query Mutation and Fine-Grained Metrics for Text-to-SQL Eval <i>ICDE 2026 — M Malekpour, M Riahi, M Lamothe, A Mhedhbi</i>	Under review.
Towards Optimizing Text-to-SQL Pipelines via LLM Routing <i>NeurIPS 2024 TRL — M Malekpour, N Shaheen, F Khomh, A Mhedhbi</i>	11/2024
Machine Learning Predictions for...Sustainable Concrete Constructions <i>Journal of Building Engineering — M Shahrokhishahraki, M Malekpour, S Mirvalad, G Faraone</i>	04/2024