

Mehdi Yazdanian, P.Eng.
Oakville, Ontario

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Profile Summary

Accomplished Data Scientist with 15+ years of combined experience in engineering and data analysis, specializing in predictive modeling, statistical methods, and machine learning. Proven expertise in leveraging generative AI to streamline data science processes and drive business outcomes, including a 15% reduction in feed expenses. Proficient in Python, R, SQL, and cloud platforms like AWS (EC2) and Streamlit.

Professional Experience

Data Science | Analyst, Arona-Chemie Co
2020 – Present / Oakville, ON

- Developed predictive models to forecast livestock growth and feed requirements, achieving a 15% reduction in feed expenses.
- Applied advanced statistical methods to evaluate the effect of various feed compositions on livestock performance.
- Created Generative AI models and used Prompt Engineering and RAG methods to automate insights and generate tailored farm management recommendations.
- Collaborated with cross-functional teams to transform data-driven insights into practical herd management recommendations.

Data Science | Analyst, Kajeh Art Institute
2022 – 2024 / Toronto, ON

- Designed and implemented a comprehensive database for historical movies and directors.
- Cleaned and structured large film archive datasets using R and SQL to ensure data quality.
- Developed a metadata framework to tag films by genre, era, and director

College Instructor | Conestoga College
September 2019 – December 2024 / Kitchener, ON

- Taught Microsoft Applications to over 1500 students, creating customized course materials and lesson plans.
- Developed a customized Excel exam system using VBA, tailored to individual students' IDs.
- Provided mentoring and support, helping students adjust to the academic environment.

Pipe Stress Analyst | SNC LAVALIN & WORLEY PARSONS*May 2012 - December 2016 | Toronto, ON*

- Led a piping design team for mining projects, ensuring compliance with industry standards.
- Performed stress calculations and simulations to optimize pipe support and material selection.
- Coordinated with multidisciplinary teams to develop detailed engineering designs and provide technical guidance.

Skills

Programming & Analytics: R & Shiny (Tidyverse), Python (Pandas, Scikit-learn, Sktime, PyCaret), SQL, FastAPI, Streamlit, H2O **Generative AI:** OpenAI API, LangChain, LangGraph, Prompt Engineering, Retrieval-Augmented Generation (RAG) **Data & Databases:** ETL workflows, Pandas DataFrames, SQL Databases, ChromaDB **Cloud & Platforms:** AWS (EC2) **Methodologies:** Predictive Modeling, Statistical Analysis (ANOVA, Regression), Machine Learning, Data Visualization, System Optimization

Education**Master of Business Administration***York University, Toronto, ON*

- Specialized in data-driven decision-making and business analytics.

M.A.Sc. in Engineering*University of Windsor, Windsor, ON*

- Conducted research in applied engineering, focusing on data analysis and system optimization.

M.Sc. in Physics*Brock University, St. Catharines, ON*

- Demonstrated expertise in experimental design, precision measurement, and data interpretation.

Sample Data Science Projects

- [Greenhouse Gas Emissions up to 2031](#): Developed a model to project greenhouse gas emissions using R and Shiny. Conducted scenario analysis to assess policy impact.
- [Select Your Crew - Rate Your Movie](#): Created an interactive tool for team selection and movie rating using R and Shiny, enhancing user engagement.

References available upon request.