

Mohsen Dehghani

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Data Scientist and ML Developer

Portfolio: [Deep Learning Page](#)
[GitHub Page](#)
[LinkedIn](#)

With over six years of extensive experience in the field of AI, I hold a master's degree from Mila - Quebec AI Institute, specializing in Machine Learning. My robust background encompasses both pure and applied mathematics, including numerical linear algebra, probability, statistics, and computer science. I have six years of comprehensive experience in the field and am a results-driven professional proficient in translating advanced knowledge into practical Python-based solutions.

WORK EXPERIENCE

Nordikeau-Montreal

Data Science Specialist 2022 — 2023

- **Data mining techniques:** include clustering, classification, regression, association rule mining, and anomaly detection. Machine learning algorithms are often applied in data mining to automate the extraction of patterns from data.
- **Data science techniques:** involve inspecting, cleaning, transforming, and modeling data to discover useful information, draw conclusions, and support decision-making.
- **Designing and developing multivariable time-series:** models for Machine Learning (ML) forecasting solutions using Deep Learning.
- **Employing advanced Data Science methodologies:** to preprocess and analyze complex datasets, ensuring the robustness and accuracy of forecasting models.
- **Proficient in utilizing Docker :** for streamlined and efficient deployment processes, enhancing the scalability and reliability of applications within the company.

KamNic Inc -Montreal

Data Analysis 2015— 2022

- **Focus:** Primarily concentrates on inspecting, cleaning, transforming, and modeling data to discover useful information, draw conclusions, and support decision-making.
- **Objective:** To uncover trends, patterns, and relationships within data, and to provide a clear and concise summary of the findings.
- **Skills:** Proficiency in statistical analysis, data visualization, and using tools such as Excel, SQL, and more advanced statistical software.

Polytechnique-Montreal

Applied Science 2013 — 2015

- **Design LSQ Algorithm for Solving Least Squares:**
 1. Developed and implemented algorithms for solving Least Squares Problems (LSQ) with a focus on accuracy and efficiency.
 2. Demonstrated proficiency in designing robust mathematical solutions for LSQ problems to optimize model fitting and parameter estimation.
- **Python Framework Development using Object-Oriented Programming (OOP) for LSQ Solver:**
 1. Designed and built a Python framework using Object-Oriented Programming principles to create a modular and extensible Least Squares Solver.
 2. Implemented classes and methods that enhance code reusability, maintainability, and scalability for solving LSQ problems in diverse applications.
 3. Leveraged OOP concepts such as encapsulation, inheritance, and polymorphism to create a well-structured and organized LSQ solver framework.

EDUCATION

Master Degree in Machine learning Specialist, University of Montreal department of Mila 2022 — 2023

Master Degree in Applied science, Ecole Polytechnique Montreal 2010 — 2013

Bachelor Degree in Mathematics, Shiraz University, Iran 2000— 2004

SKILLS

Tools and Languages	Python (PyTorch, Scikit, Pandas, Numpy, Matplotlib, TensorFlow, Sktime, XGboost, Mysql, Statsforecast, Neuralforecast), Forecasting, git, SageMaker, and AWS.
Deep Learning	CNN, RNN, and other advanced neural network architectures
Mathematics	Mathematical optimization, Mathematical Modeling, Strong mathematical aptitude, including numerical linear algebra, probability, and statistics
Data Science	Data analysis, collection, Data Preprocessing, and modeling
Statistical Methodology	Proficient in applying statistical techniques
Collaboration	Effective team collaboration and communication
Communication	English, French

Publication

[Regularized interior-point method for linear least squares](#) 2019

Awards

[Mitacs](#) 2022-2023

Natural Sciences and Engineering Research Council of Canada (NSERC) 2010-2013