Mojtaba Ghasemi

Data Scientist

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Summary

- Highly motivated data enthusiast with a solid background in mathematics, statistics, literature review, and analytical tools to conduct data cleaning, processing and interpretation, database, machine learning, and data visualization. I can identify patterns and translate complex datasets into meaningful and reliable business insights to facilitate decision-making.

- Ph.D. in Biomedical Engineering from Polytechnique de Montreal and a graduate degree in Data Science from the University of Tehran and Springboard Bootcamp, my academic background is robust, merging hard science with the complex world of data interpretation.

- My past experience focuses on harnessing the power of data by applying statistics and machine learning to deliver data-driven solutions, design and analyze rigorous experiments, build actionable dashboards, and communicate results and scientific writing.

- With the experience of solving problems based on data science coupled with my research and analytical experience, I'm now looking to channel my expertise into new challenges in the Data Science field, where I aim to drive business growth and innovation through strategic data utilization.

Technical Strength

- Programming Languages: Python | R | MATLAB | Dax
- Data Science: Scikit-Learn | Tensorflow | PyTorch | Pandas | NumPy | SciPy | Spark | SQL | NLTK | TensorFlow | Matplotlib | Seaborn | ggplot2| Sampling
- Business Intelligence: Tableau | Power BI
- Reporting: SAP Crystal Report | Meditech | Advanced Excel
- Relational Database: Microsoft SQL| MySQL | PostgreSQL
- ML Algorithms: Predictive modeling | Regression, | Classification | Clustering | A/B Testing | Deep Learning, Natural Language Processing | Recommendation Systems | Time Series | Association Rules | Model Evaluation
- Analytical Software: IBM SPSS Modeler
- Software Engineering: Agile | Version Control (Git)
- **Analytical Skills**: Data Modeling | Data Visualization | Feature Engineering | Statistical Analysis | Data Analysis | Storytelling

Soft Skills: Self-Driven | Good communication | Leadership | Problem Solving | Decision Making | Project Management | Teamwork | Time Management | Adaptability | Business Acumen | Critical Thinking

Work Experience

William Osler Health System – Clinical Data Analyst - August 2022 - Present

- Extract, generate, and analyze meaningful reports and dashboards from various databases for internal and external stakeholders to assist in an efficient decision-making process using Microsoft SQL Server, SAP Crystal Report, and Power BI (using tabular models, create different measures and calculated columns using DAX, implementing features like RLS, dynamic filter and drill through).
- Translated data-driven insights into modifications resulting in approval from CCO.
- Data wrangling, processing, and visualization of Diagnostic Imaging large datasets produced by RIS and Meditech.
- Analyze data for trends and patterns, interpret data, perform predictive and statistical analysis, and supervised and unsupervised learning.
- Develop machine learning models to predict inpatient and outpatient MRI/CT for radiology utilization using Scikit-learn, PyTorch, Pandas, Numpy, Pyodbc, Matplotlib, and Seaborn.

Polytechnique de Montreal – Research Associate - January 2016 - January 2022

- Leading a research team in a data-driven approach to enhancing cyclist performance using statistical and machine-learning methodologies.
- Establishing experimental protocols and data collection procedures for cycling trials, prioritizing data integrity and compatibility.
- Undertaking sophisticated data wrangling and integration for meaningful extraction of insights from complex datasets.
- Utilizing machine learning algorithms, such as Ridge and Lasso Regression and clustering techniques, to predict cycling performance and power output and discover underlying patterns.
- Applying robust data science techniques, including Recursive Feature Elimination, Principal Component Analysis, and K-fold Cross Validation, specifically focusing on cyclists' physiological and kinematic features.
- Creating quality metrics to ensure the reliability and accuracy of equipment data.
- Constructing and managing an extensive database of cyclist performance metrics, including EMG, kinematics, kinetics, and aerodynamics.
- Developing an innovative image processing product for detecting biomechanical signals and visualizing large datasets from Microsoft Kinect v1 and v2.
- Spearheading the creation of a cost-effective, markerless motion capture system using the elliptical zone method for parameterized 3D body modeling, showcasing innovation in data science solutions comparable with $50K systems.
- Mentoring team members in research design, innovative biomedical studies, and advanced data analysis techniques.

Ariana Movement Galaxy – Data Analyst - March 2015 - June 2016

- Execution of biomechanical testing, performance modeling, and data analytics.
- Creating custom Python and MATLAB modules for 3D motion capture.
- Data analysis for classification of vertical jump (Random Forest, Data Preprocessing).
- Developed Excel dashboards to explain data variation and trends to the non-technical audience.
- Performed complex statistical and prediction reports using Python, R, MATLAB, and SPSS to evaluate professional athletes.

Musculoskeletal Research Center, Isfahan University of Medical Sciences - Research Associate - April 2013 - March 2015

- Engaging in comprehensive data analysis, using statistical techniques to interpret complex data from force plates and motion capture systems.
- Applying data science and machine learning methodologies to decode patterns, extract insights, and make meaningful predictions from collected data.
- Working closely with diverse patients and athletes, assisting in understanding, and improving their health and performance based on data-driven insights.
- Contributing to the development of personalized treatment strategies through advanced data analytics.
- Expanding data science and machine learning expertise in a healthcare environment focused on human biomechanics.

Education

University of Tehran – **Graduate Diploma in Data Science** – 2022

- Statistics and Linear Algebra
- Microsoft SQL Server
- Microsoft Power BI
- Machine Learning Algorithms
- R Programming
- Machine Learning Using Python
- Time Series
- Recommender Systems
- Text Mining and Web Mining
- Social Media Analysis
- Deep Learning
- Big Data
- Data Storytelling Tableau
- Data Management & Governance
- Process Mining

Polytechnique de Montreal – Ph.D. in Biomedical Engineering - 2022
Overall GPA: 3.94/4.00

Amirkabir University of Technology (AUT) – MSc. in Biomedical Engineering - 2015
Overall GPA: 3.77/4.00

University of Isfahan – BSc. in Mechanical Engineering - 2013
Overall GPA: 3.00/4.00

Certifications

SQL Advanced - HackerRank
Issued: Jul 2023 - No Expiration Date
Credential ID: 657BB19CF368

Python - HackerRank
Issued: Jan 2023 - No Expiration Date
Credential ID: FB8EC0359C1F

Azure AI Fundamentals (AI-900) - Microsoft
Issued: May 2022 - No Expiration Date
Credential ID: 993249642

Spark NLP for Healthcare Data Scientists – John Snow Labs Training & Certification
Issued: Oct 2022 - No Expiration Date
Credential ID: 25718612324

Honors and Awards

Bourse de doctorat en recherche pour étudiants étrangers (FRQNT Fellowship) – 2017-2020
Bourse de doctorat (Fellowship) – Polytechnique Montréal – 2016-2021
Bourse compensant les droits de scolarité majorés pour étudiants internationaux – Polytechnique Montréal – 2016-2021
Master of Science's Full Scholarship - Amirkabir University of Technology – 2013-2015
Bachelor of Science's Full Scholarship - University of Isfahan – 2008-2013
Semifinalist in Russian Mathematical Tournaments – 2004