Mohammad Hamza Laghari

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Education

Master of Science in Business Analytics (Data Science), **Mar 2021 – Sep 2022**
NYU Stern School of Business, New York, United States of America.
MSBA is the intersection of business and data science, unlocking the predictive potential of data analysis, to improve financial performance, strategic management, and operational efficiency.

- Elected class representative from a class strength of 63 students

Bachelor of Science in Aviation Sciences, **Sep 2012 – Jun 2016**
Abu Dhabi University, Abu Dhabi, United Arab Emirates.
This degree focused on core study areas – Airline Management, Airport Operations, Flight Operations, Infrastructure Operations, and Technical Systems.

- Graduated amongst ***top 10%*** of the cohort

Certifications

- Project Management Professional (PMP) – ID#2775384; Expiry Jun 2023
- Azure DP-100, Azure Data Scientist – in-progress
- AWS MLS-C01, AWS Certified Machine Learning Specialty – in-progress

Employment history

AI & Data Science Advisor, Product – TwentyToo (Fashion Discovery Startup) **Apr 2022 – Present**

- Advise and consult on artificial intelligence (AI) strategies, helping TwentyToo to harness the power of AI technologies to drive innovation and achieve business objectives.
- Provide guidance on data-driven decision-making, leveraging AI algorithms and models to analyze complex datasets and generate actionable insights.
- Designed and executed A/B experiments at scale to assess and enhance product performance, employing rigorous statistical methodologies and hypothesis testing

Data Scientist/ Analytics Lead – Dubai Holding Group **Jul 2022 – Mar 2023**

- Work with the Head of DP to develop data products and enhance existing data privacy metrics to provide meaningful management information for senior management and board reporting.
- Developed GDPR compliance interpreter using NLP techniques to interpret regulations and assign weightages on the importance of the GDPR compliance policies for all countries of operations
- Engineered end-to-end ETL and ML pipelines, automated and analyzed Records of Processing Activities, Personal Data collection, Network Analysis on Data transfers, Cookie data analysis reports on Power BI

Data Scientist, Forensics, Financial Crime and Analytics – Deloitte **Sep 2021 – Jul 2022**

- Developed and deployed dashboards and algorithms to detect anti money laundering and anomaly payments and display Procure to Pay lifecycle – realized ~ **USD 30M** in potential anomalous transactions, deployed the model on Power BI
- Designed and maintained fraud detection models using unsupervised statistical techniques such as LOF and Isolation Forest to realize anomalies and potential fraud.
- Built predictive models by modeling data, using various machine learning algorithms and techniques to predict the possibility of future fraudulent activity – ***obtaining the recall scores of 85%.***
- Developed data pipelines and optimize data storage and retrieval, ensuring efficient and effective use of data for fraud detection.
- Collaborated with cross-functional teams to investigate and resolve suspected fraudulent activity, utilizing advanced analytical techniques to provide insights into potential fraud schemes.

Data Scientist, MSBA Capstone – Schlumberger **Mar 2021 – May2022**

- Played a key role in improving sales forecasting of offshore rigs and spare part maintenance for a client in the oil and energy industry, resulting in $7M annual savings and deploying the model on Power BI
- Conducted geo-spatial, time-series, and sentiment analysis (NLP) to enhance sales prediction accuracy.
- Collaborated with the NYU MSBA team and Schlumberger team as part of the capstone project, gaining valuable industry insights and experience.

Business Analyst – VaporVM **Jul 2020 – Mar 2021**

- Chaired the development of the business architecture by engaging stakeholders, streamlining ticketing time, and cleaning a backlog of 400 pending tickets; resulting in well-defined processes an ***18% increase*** *in workplace productivity*.

Business Intelligence Consultant (Operational Excellence) – Etihad Aviation Group **Aug 2016 – Jul 2020**

- Developed optimization strategies by decreasing standard ramp team size, annually **saving USD 250k** in overtime payouts, ***6% increase*** *in total ramp teams and promotions*, *and a* ***40% increase*** *in operational efficiency.* Contributing to Etihad Airways '*Most Punctual Airline in the Middle East'* award. - (Global Analytics Group, 2019)
- Spearheaded the implementation of the new Resource Management System, successfully transitioning to the new system catering to more than 4000 employees and facilitated workshops and project retrospectives to the team.

Data Analyst (Workforce Management) – Etihad Aviation Group **Jun 2015 – Aug 2016**

- Designed dashboards and reports to track KPI's and identify workforce trends on excel and led the transformation to Power BI, reducing dashboard creation times by 75%.

Tech Stack/ Skills

- **Programming:** Python, R
- **DL:** PyTorch, Tensorflow
- **Database:** SQL, DAX
- **Cloud:** GCP, Azure, AWS
- **ML:** Scikit (SKLearn), caret
- **Big Data:** Hadoop, PySpark
- **Statistical Analysis:** Stata
- **Visualization:** PowerBI, Tableau
- **Microsoft and G Suite**

Projects *(https://www.github.com/mhlaghari)*

Machine Learning:

- **Talent Flow Analysis:** Analyzed large-scale social media datasets using social network analysis techniques to extract valuable insights. The project resulted in actionable recommendations related to talent flow, helping organizations make informed decisions.
- **NBA (sports) analytics:** Utilized local factor outlier (LOF) analysis to identify the most interesting, different, and anomalous NBA players over time. The project aimed to uncover unique player profiles and patterns in order to gain valuable insights into player performance.
- **Marketing - Customer Segmentation:** Implemented k-means clustering techniques to segment customers based on their characteristics, behaviors, or preferences. This project helped optimize marketing strategies by targeting specific customer segments with tailored campaigns and offers.
- **Big Basket Product Recommendations:** Developed a recommendation system using association rule mining for India's largest grocery company, Big Basket. The system provided personalized product recommendations for mobile shoppers, enhancing the customer experience and increasing sales.
- **Movie Recommender System:** Built a movie recommender system using both product-based and content-based approaches. The system suggested relevant movies to users based on their preferences, helping them discover new films aligned with their interests.
- **Universal Bank - Promotion Analytics:** Conducted promotion analytics to identify the target audience for marketing campaigns in a universal bank setting. The project aimed to optimize promotional efforts by determining the most receptive customer segments.
- **Income Prediction:** Collaborated with a credit card company to predict individual income, assisting in deciding whether to extend credit card offers. This project utilized machine learning techniques to estimate income levels based on various features.
- **Medicine - Detecting Breast Cancer:** Developed a predictive model to detect breast cancer by analyzing cell characteristics. The model classified cells as malignant or benign, contributing to early and accurate diagnosis.
- Veteran's Fundraising: Utilized data analysis techniques to predict which individuals were likely to donate to veteran causes. The project helped identify potential donors, enabling targeted fundraising efforts.
- **Bulldozer Sales Regression Analysis (Kaggle):** Participated in a Kaggle competition focused on regression analysis for predicting bulldozer sales prices. The project involved developing and evaluating machine learning models to estimate the sale prices of bulldozers.

Business Analytics, Linear Programming & Optimization:

- **Airline Pricing - Linear Programming:** Applied linear programming techniques to optimize airline pricing strategies. The project aimed to determine the optimal number of seats to sell at a discounted rate to maximize revenue.
- **Optimal Logistic Planning:** Developed a logistics planning model to minimize costs in supply chain operations. The project involved optimizing routes, inventory levels, and transportation methods to achieve cost efficiency.
- **Decision Modeling:** Employed decision modeling techniques to analyze complex scenarios and make informed decisions. This project involved designing and implementing mathematical models to support decision-making processes.
- **Causal Analysis:** Conducted causal analysis to identify cause-and-effect relationships in problem domains. The project aimed to uncover underlying factors contributing to specific issues or outcomes.
- **Revenue Management - Willingness-to-Pay:** Considered customers' willingness-to-pay in revenue management strategies. The project involved pricing optimization and customer segmentation based on their perceived value, maximizing revenue generation.
- **Geospatial Analysis - Store Location Planning:** Utilized geospatial analysis techniques to determine optimal locations for opening new Home Depot and Lowes stores. The project involved analyzing demographic data, competitor locations, and market potential.

Deep Learning:

- **Fashion MNIST – Computer Vision:** Analyzed a dataset consisting of 60,000 images belonging to 10 different classes. The project focused on applying computer vision techniques to classify and understand fashion-related images using TensorFlow
- **101 Food Vision Classification- Computer Vision:** Classifying 101 food categories using TensorFlow and ResNet.
- **Disaster or not – NLP:** Leveraged transformer models in an NLP project to classify disaster-related content with high accuracy.
- **Skim literature – NLP:** Summarizing medical research papers into easy-to-read format.