Hamzah Al Jabari

Data Scientist

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Summary

Curious explorer of intricate datasets, adept at distilling valuable insights using ML and DL algorithms. Dedicated to fueling business success through Python proficiency, transforming data into decisive strategies. Eager to channel expertise into impactful projects spanning sales, healthcare, and insurance domains. Vision: To pioneer innovative data solutions, tackling real-world challenges and propelling positive transformation. Collaboration catalyst, excited to connect with fellow professionals for mutual growth in the dynamic data universe.

Skills

Soft Skills: Communication & Collaboration, Problem-Solving, Adaptability & Curiosity, Storytelling, Creativity & Attention to Detail

Technical skills: Python, C++, MATLAB, Machine Learning, Recommendation Systems, Deep Learning, Microsoft Office, Data Visualization, NLP, Data Engineering

Languages: Arabic (Native), English (Full Professional), Turkish (Professional), German (Elementary)

Work Experience

Orange Jordan — Amman, Jordan

Intern Data Scientist — *May 2023 – Jul 2023*

- Acquired comprehensive training in data science encompassing Statistical analysis, Data visualization, Machine Learning (ML), Natural Language Processing (NLP), recommendation systems, and big data technologies.
- Employed advanced data analysis and feature engineering methods to extract valuable insights from a supermarket's weekly sales dataset.
- Formulated and executed innovative machine learning models (XGBoost, Random Forest, CatBoost) to predict supermarket weekly sales, achieving consistent accuracy levels of 95% and above.
- Developed a user-friendly Streamlit program/web page for sales forecasting (Weekly, Monthly, Yearly)

DESAISIV — Amman, Jordan

Intern Data Scientist — *Aug 2022 – Apr 2023*

- Utilized Python and Power BI to analyze 20 years' worth of hospital data, unearthing valuable insights regarding departmental operations.
- Devised a predictive model to anticipate medical resource consumption, leading to a reduction in expirable medical inventory within warehouses.
- Constructed a precise predictive model for insurance claims data, accurately forecasting premiums for diverse age bands of subscribers.
- Implemented a comprehensive fraud detection algorithm by merging Machine Learning (ML) and Deep Learning (DL) techniques, effectively identifying impending fraud and policy misuse by policyholders.
- Reduced insurance loss-ratio by accurately predicting developing diseases using unsupervised learning.

Istanbul Bilgi University — Istanbul, Turkey

Student Research Assistant — *Jun 2021 – Jan 2022*

- Enhanced potential fields path planning for autonomous mobile robot with real-time LIDAR-based obstacle avoidance.
- Proposed and validated novel algorithms, optimizing autonomy and obstacle avoidance.
- Published paper showcasing expertise in optimizing cost functions and advanced path planning techniques

Education

Istanbul Bilgi University — Istanbul, Turkey

B.Sc. in Mechatronics Engineering; ***GPA: 3.04/4.00*** — *Sep 2017 – Jul 2021*

Projects

Supermarket Weekly Sales Forecasting *May 2023 - Jul 2023*

Orange Jordan

- Led the development of a 96% accurate sales forecast model for a major supermarket, utilizing an ensemble stacked approach (Random Forest, XGBoost, CatBoost).
- Engineered features, optimized the model with Recursive Feature Elimination (RFE) and hyperparameter tuning, achieving a low Mean Absolute Error (MAE) of 2143.
- Designed and created a user-friendly Streamlit interface for intuitive sales predictions.

AI-Powered Healthcare Fraud Detection System *Nov 2022 - Apr 2023*

DESAISIV

- Spearheaded the creation of a comprehensive end-to-end AI-powered fraud detection system for healthcare claims, collaborating closely with domain experts.
- Orchestrated innovative features and applied advanced Machine Learning techniques (Isolation Forest, Gaussian Mixture Models, ensembles) for precise fraud detection.
- Introduced a novel abuse scoring system, enhancing operational efficiency and resulting in cost savings.

Healthcare Premium & Disease Prediction *Nov 2022 - Apr 2023*

DESAISIV

- Innovated premium calculation by extracting insightful rules from evolving disease codes, optimizing accuracy and performance.
- Played a pivotal role in developing a precise predictive model for insurance claims, seamlessly incorporating evolving disease data for ongoing model refinement.
- Produced comprehensive disease-related reports driving accurate premium forecasting.

Hospital Data Analysis and Forecasting *Aug 2022 - Nov 2023*

DESAISIV

- Employed Python to meticulously analyze two decades' worth of hospital data, uncovering actionable insights that contributed to the enhancement of departmental operations.
- Conceptualized and constructed a robust monthly forecasting model for medical resource consumption, ensuring consistent accuracy in predictions.

Advanced Path Planning for Autonomous Robots *Jun 2022 - Jan 2023*

Istanbul Bilgi University

- Collaboratively authored and presented pioneering research at the 2022 IEEE International Conference on Advanced Motion Control.
- Took the lead in a groundbreaking path planning endeavor, revolutionizing the navigation of mobile robots in intricate environments through the application of an original Artificial Potential Fields (APF) algorithm.
- Made real-world impact by enhancing autonomy and obstacle avoidance through real-time LIDAR-based solutions.

- Published paper: **"A New Artificial Potential Field Based Global Path Planning Algorithm for Mobile Robot Navigation"** - Hamzah Al Jabari, Abdulrahman Alobahji, Eray A. Baran, In: 2022 IEEE 17th International Conference on Advanced Motion Control (AMC).