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Noureddine BOULLAM

Engineer Data Scientist

Location: Paris, France
LinkedIn: noureddineboullam
Portfolio: BoullamTech

Driven **Data Scientist** with a passion for leveraging data to solve complex problems. Seeking a role in an innovative company where I can apply my expertise in Data Science, Advanced Statistics to deliver impactful insights and foster continuous growth.

Technical Experience

Data Scientist / AI-Powered Fraud Detection and Automated Document Processing Expert Apr. 2024 – Present
AXA - Direct Assurance, Suresnes, Paris

- Developed and deployed fraud detection models for insurance underwriting using supervised learning and feature engineering
- Led the development of an AI-powered document processing system with **OCR** and **LLMs**, achieving a performance accuracy of **84%** in automated document extraction and validation, significantly improving operational efficiency
- Implemented **CI/CD** and DevOps practices for automated model deployment and scaling, processed large datasets using Azure Databricks, SQL, PySpark, and Python, and applied statistical modeling with probabilistic methods to improve risk assessment accuracy

NLP Data Scientist / Knowledge Graph and Supply Chain Analysis Jan. 2024 – Apr. 2024
ADIA - Abu Dhabi Investment Authority, Remote

- Developed a knowledge graph using **NLP** techniques to analyze 17 years of US port import/export data, processing over a billion shipment records to map global supply chain dynamics
- Collaborated with senior Quantitative R&D specialists to apply advanced NLP and data analysis methods, gaining key insights into cross-border trade transactions

Machine Learning Engineer / Churn Prediction and Retention Strategy Development Mar. 2023 – Sept. 2023
AKUMEN IA - (Valyans / AIOX Labs JV), Paris

- Developed a **churn prediction model** using **XGBoost** and implemented retention strategies, enhancing customer retention in the taxi insurance sector
- Created **interactive dashboards** in **Power BI** for data visualization, and applied **agile methodologies** using **Azure DevOps** to manage the project
- Utilized **PySpark**, **Oracle Cloud**, **Python**, **Docker**, and **Spark** for data processing and model deployment

Research Data Scientist / Ontology-Driven Sentiment Analysis and Thematic Modeling Jun. 2022 – Sept. 2022
University of Malaya, Kuala Lumpur

- Performed **sentiment analysis** and **thematic modeling** using hybrid approaches (semi-supervised learning, topic extraction) to evaluate COVID-19's impact on the Malaysian population
- Leveraged Python, NLP techniques (Natural Language Processing), web scraping, and data visualization tools (Power BI) to generate insights on key topics such as vaccination, education, and economic sentiment

Education

Data Science & Advanced Statistics, Ecole Polytechnique de Paris (l'X) Sep 2023 – Sep 2024
Master's Degree

General Engineering, EMINES - Mohammed VI Polytechnic University Sep 2020 – Sep 2023
Bachelor's Degree

CPGE MPSI-MP** Sep 2018 – Sep 2020
Preparatory Classes for Engineering Schools

Skills

Programming Languages: Python, SQL, DBT, Spark, Docker, Terraform, R, Scala, SAS, Docker, PowerBi, Tableau

Libraries: Pandas, NumPy, Matplotlib, scikit-learn, Flask, TensorFlow, Seaborn, SciPy, NLTK, Statsmodels, Keras

Ecosystems: Git, Azure-Databricks, GCP, Hadoop, BigML, AWS, Oracle, Kedro, Snowflake, PowerBI, Tableau

Quantitative Research: Optimization for Data science, Generative Models, Statistical Learning Theory, Advanced Learning for Text and Graph, High Dimensional Matrix Estimation, Convex Analysis and Optimization Theory

Communication: French, English, Arabic

Awards

X-MVA: Data-Challenge Molecule Retrieval with Natural Language Queries
École Polytechnique, Paris

- Developed a contrastive learning model with Graph Isomorphism Network (GIN) for molecular graph retrieval based on natural language queries / Achieved an LRAP of 0.81, significantly outperforming the challenge baseline of 0.35

Hi!ckathon: Supply Chain et AI pour les Prédictions de Ventes / Schneider Electric
ENSAE- X- Telecom Paris- ENSTA, Paris

- Resolved business problems, prepared and explored data, developed AI models, and deployed projects
- Winner: The Kering award for the best interdisciplinary approach to the problem