Hammada Lekehal

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PROFILE

Industrial Engineering specialized in Data Science for Smart Industry. Passionate about data analysis and artificial intelligence, I aim to apply my skills in predictive analytics and optimization within a stimulating and impact-driven environment.

PROFESSIONAL EXPERIENCE

CIS MINES SAINT STIENNE & UNIVERSITÉ CLAUDE BERNARD LYON 1 April 2025 – Present
Final Year Project – Data Analyst *Saint-Étienne, France*
Analysis of the factors underlying coercive practices in psychiatry.

- Preprocessed and analyzed national healthcare datasets (RIM-P) related to psychiatric care pathways.
- Applied Machine Learning and Process Mining techniques to identify trajectories leading to coercive measures.
- Conducted comparative analysis between hospitals and modeled the impact of coercive practices on care continuity.
- Used Large Language Models (LLMs) to automate the summarization and synthesis of complex data from care pathways.

HUBBLEMIND September – October 2024
Machine Learning Intern *Remote, India*
Development of a machine learning model to predict Amazon stock prices.

- Conducted exploratory data analysis (EDA) on financial time series using Pandas and Seaborn.
- Selected key features (correlation analysis, SHAP) and trained models (LSTM, ARIMA) using TensorFlow.
- Achieved a 7-day forecast MAE of 1.2

ENIT – LAMSIN Laboratory July – August 2024
Data Science Intern *Tunis, Tunisia*
Comparing weather forecasting models: Machine Learning vs. Dynamic Systems.

- Processed a dataset of 1.2 million entries from 10 major U.S. cities.
- Developed models: Linear Regression ($R^2 = 0.76$), Random Forest (0.89), LSTM (0.93).
- Created interactive dashboards with Power BI: heatmaps, time series, and model comparisons.

BONTAZ TUNISIA June – August 2023
Research Intern *Tunis, Tunisia*
Workflow analysis and development of predictive models to improve operational efficiency.

- Proposed and implemented process improvements based on data-driven insights.

EDUCATION

Doctoral School of Engineering Sciences and Technologies 2024 — Present
Master's in Next Production Revolution (NePRev) *Tunis, Tunisia*
National School of Engineers of Tunis (ENIT) 2022 — Present
Industrial Engineering – Specialization: Data Science for Smart Industry *Tunis, Tunisia*
Preparatory Institute for Engineering Studies 2020 — 2022
Cycle Preparatory Program in Mathematics and Physics *Nouakchott, Mauritania*

ACADEMIC PROJECTS

Flight Data Analysis in the United States

- Identified optimal times and days to minimize delays.
- Analyzed the impact of aircraft age and built predictive models using Machine Learning and Deep Learning.

Prediction of Technical Failure in Peritoneal Dialysis

- Developed a predictive model using machine learning algorithms in R for a hospital in Sahloul.
- Created a Shiny-based graphical interface for real-time model interaction.

SKILLS

Programming Languages :	**Python, C, R, SQL, MATLAB**
Databases :	**MySQL, Oracle, SQLite**
Data Analysis :	**NumPy, Pandas, Matplotlib, Seaborn, Power BI, Excel avancé**
Machine & Deep Learning :	**LLM, TensorFlow, Keras, Reinforcement learning, Sklearn**
Optimization & Industrial Tools :	**Lean Management, simulation (Arena), MRP, JIT, PIC, PDP**

LANGUAGES

Arabic : Native **English :** Fluent **French :** Fluent