

Final Assignment

This task aims to utilize the dataset from the [Store Sales Time Series Forecasting competition on Kaggle](#) to analyze historical sales data and build a model to forecast future item sales. This task offers a valuable opportunity to practice implementing a complete machine learning pipeline, from data exploration to final reporting.

Task Objectives

- **Explore and analyze the dataset** to extract meaningful patterns and insights related to store and item sales.
- **Identify low-performing items and stores** and provide business recommendations to help increase their sales.
- **Create lagged features** to capture temporal dependencies (a great chance to reinforce your understanding of SQL window functions).
- **Engineer additional useful features**, such as holidays or day-of-week effects, and explain why they might influence sales.
- **Select and justify an appropriate model and evaluation metric** for forecasting item-level sales.
- **Forecast future sales** using the chosen approach and assess performance.

Deliverables

- Clean and well-documented code.
- A PDF or PowerPoint summarizing:
 - Key findings
 - Feature engineering and selection process
 - Chosen model and evaluation metric with justifications
 - Final business insights and recommendations

Deadline

- Please submit all deliverables by **Tuesday, 3/6/2024, at 11:59 PM.**

Feel free to look at Kaggle notebooks for ideas but try to be creative. Please practice writing your code and avoid using ChatGPT or other AI tools to generate it.

Email your submission to: Shalakany.asmaa@gmail.com