Title: Data Analytical Engineer - Task Details

Final Objective:

The primary goal of this task is to extract valuable insights from the provided dataset through comprehensive data analysis and visualization. The Data Analytical Engineer is expected to uncover patterns, trends, correlations, or any noteworthy information within the data. Additionally, the final objective is to create a well-structured presentation or dashboard, utilizing suitable BI tools, to effectively communicate these insights to stakeholders and team members.

Dataset Description:

- **About Data :**
  - Ukraine and Russia are major exporters of agricultural commodities, including wheat, corn, sunflower oil, and fertilizer.
  - Together, they account for about 30% of the world's wheat exports, 60% of the world's sunflower oil exports, and 20% of the world's corn exports.
  - The war in Ukraine has disrupted global food supplies, as Ukrainian ports have been blocked and Russian exports have been sanctioned.
  - This has led to rising food prices and concerns about food shortages in some countries.
  - The United Nations has warned that the war could have a "devastating impact" on global food security.
  - Here are some specific examples of how the war in Ukraine has affected global food supplies:
  - Wheat prices have risen by more than 50% since the start of the war.
  - Sunflower oil prices have doubled.
  - The price of corn has risen by about 30%.
  - The price of fertiliser has risen by more than 100%.

- **Dataset File URL:** Google Sheets - Dataset
- **Metadata Sheet:** Contains descriptions of dataset columns.

Key Responsibilities:

Data Cleaning and Preprocessing:

- Execute data cleaning, validation, and preprocessing procedures to ensure accuracy and consistency.
- Address missing data, outliers, and inconsistencies using appropriate methodologies.

- Implement techniques to enhance data quality and reliability.

Data Analysis and Visualization:

- Conduct exploratory data analysis (EDA) using Python, R, or similar programming languages to reveal patterns, trends, and relationships within datasets.
- Apply statistical techniques and algorithms to extract valuable insights from the data.
- Develop visualizations and meaningful data representations to facilitate a comprehensive understanding of complex information.

Data Presentation:

- Design and create interactive dashboards and presentations that tell a compelling story using tools like Tableau, Power BI, or similar platforms.
- Implement multiple filters and interactive elements to enable users to effectively explore preprocessed data.
- Communicate findings and insights derived from data analysis clearly and concisely to stakeholders and team members.

Final Submission Requirements:

- Cleaned data file, either in Google Sheets format or as a zip file.
- Exploratory data analysis report file, provided either as a URL or within a zip file.
- Published dashboard URL from any BI tool used (e.g., Power BI, Tableau).

Note: The ultimate aim is to extract meaningful insights from the dataset and present these insights through a comprehensive dashboard or presentation, enabling stakeholders to comprehend and utilize the findings effectively.