

Data Analyst Assignment

Documentation

Analyzing Transport Data Using Power BI

Objective:

The objective of this assignment is to leverage Power BI for the comprehensive analysis and visualization of transportation data sourced from a provided Excel file. This task aims to provide participants with practical experience in converting raw data into actionable insights, developing interactive dashboards, and deriving informed business decisions through the analytical process.

Dashboard Overview:

Title: *Transportation Analytics*

Components:

- ETL (Data Extract Transform and Load)

Data Cleaning:

- In the data there is some case of delivery date before ship date or the difference of delivery date and ship date is negative so in this case it can be considered as outliers or it may be reversed journey. In this case there is 53 cases of negative values in international trip type.
- I have created another column where I have used logical function to make those row as blanks where there is negative values and then I have filtered all the blanks
- To ensure the Data Types of all variables

Data Exploration Summary

I this section I have made tiles for every numeric variable which makes easier to understand the data

Visualizations:

Time Series Analysis:

- Analyzed trends over time for Ship Date and Delivery Date to identify patterns and seasonality.

Geographic Analysis:

- Visualized the origin and destination cities on maps to understand distribution and routes.

Revenue and Cost Trends:

- Examined the trends in Revenue and Shipping Cost over time to identify fluctuations and patterns.

Key Performance Indicators (KPIs):

- Defined and calculated relevant KPIs such as Total Miles, Loaded Miles, Shipping Cost, Revenue, and Ship Days to measure transportation performance.

Filtering and Slicing Options:

- Implemented filters and slicers to enable dynamic data exploration, allowing users to focus on specific time periods, categories, or trip types.

Conclusion:

The Power BI dashboard provides a comprehensive analysis of transportation data, allowing users to gain insights into efficiency, costs, and revenue. By leveraging dynamic visualizations and interactive features, users can explore the data effectively and make informed business decisions.