Techdome Solutions

Data Analyst Assignment

Assignment Title:-Analyzing Transport Data with Power BI.

1.Data import and Cleaning:

First of all, I was imported the Excel file into Power BI. Then I was cleaned the data by handling missing values, outliers .

2.Data Exploration:

I was understand the data set the distribution and characteristics of the transportation of the data.

Total Miles:

Use the SUM function to calculate the total miles traveled.

Loaded Miles:

Use the SUM function to calculate the total loaded miles.

Shipping Cost:

Use the SUM function to calculate the total shipping cost.

Revenue:

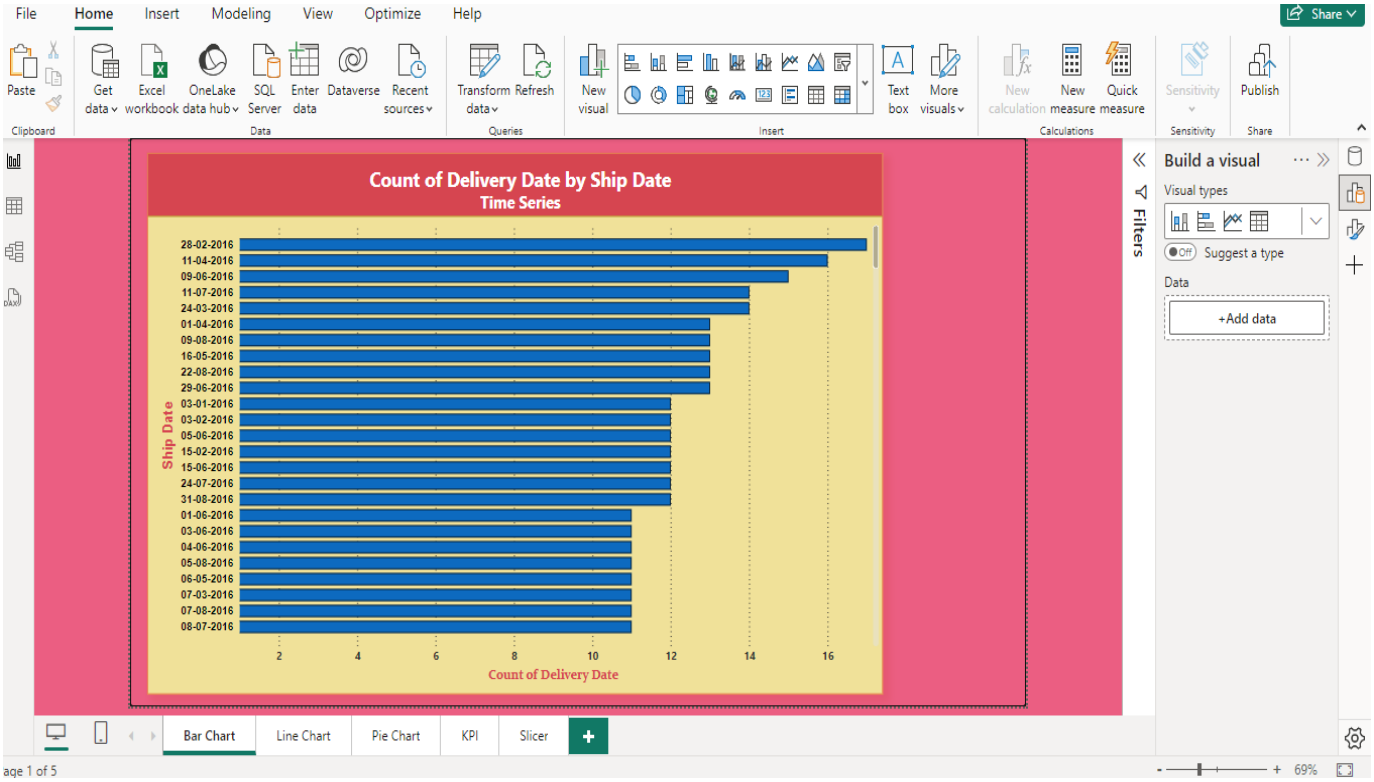
Use the SUM function to calculate the total revenue generated.

Ship Days:

Use the COUNT function to calculate the number of ship days (assuming each row represents a shipment).

3.Visualiztion:

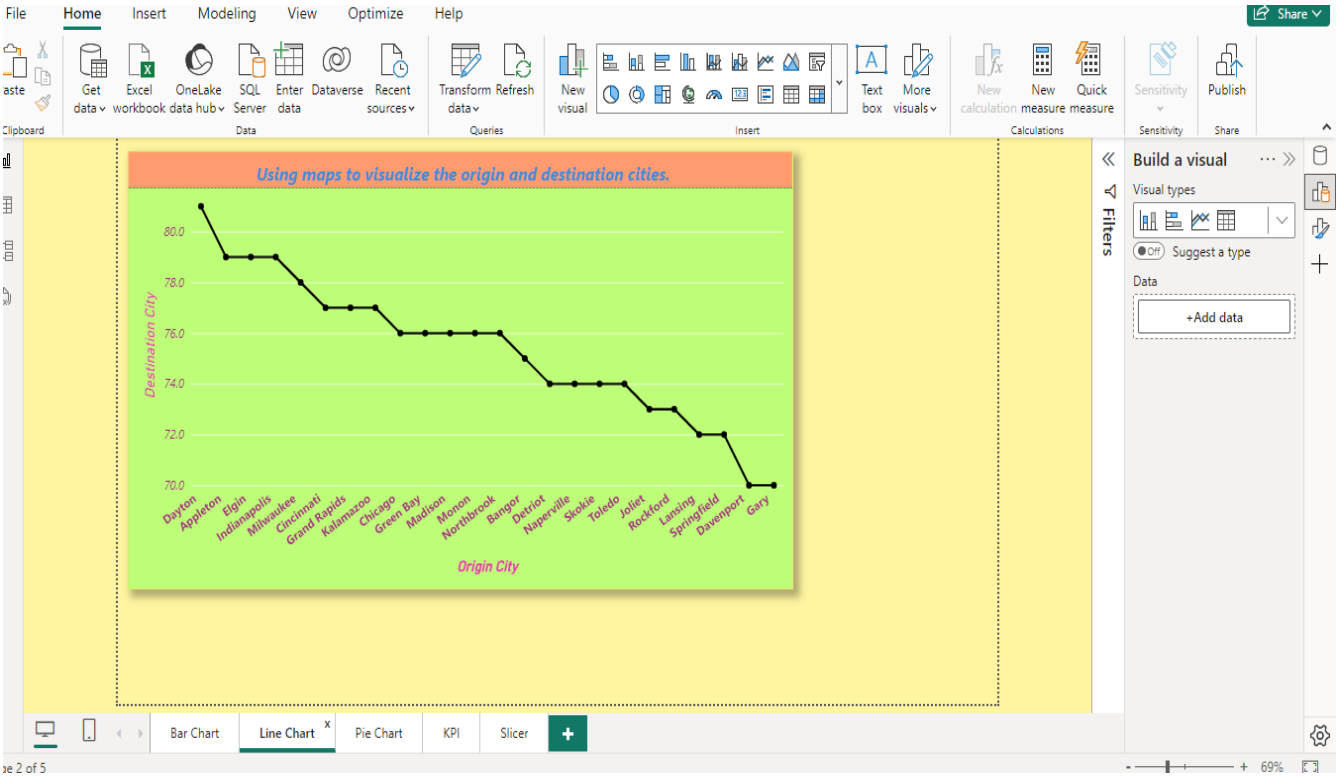
Time Series analysis for Ship Date and Delivery Date:



I was created the count of delivery date by ship date using bar chart .The bar chart of the lines was created Blue colour with black colour background

And x-axis is the count of delivery date,y-axis is the ship date .

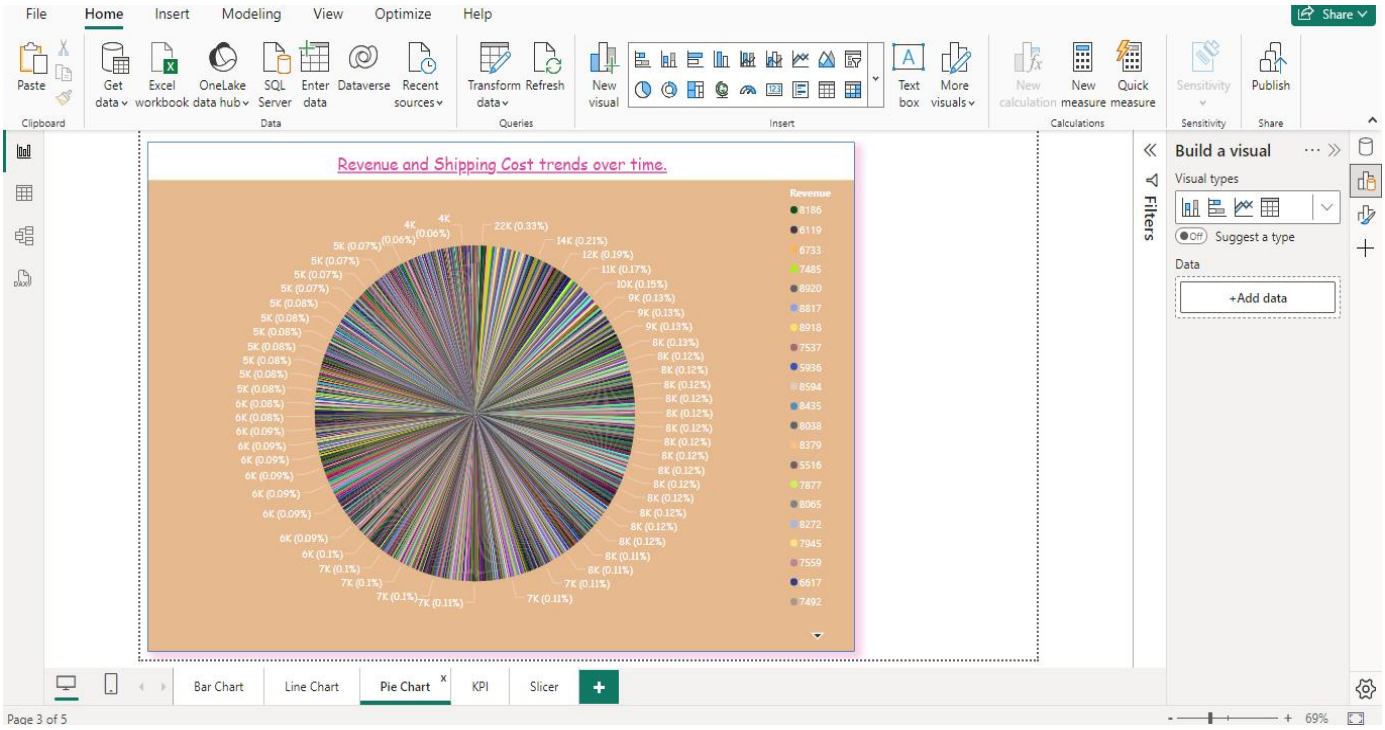
Geographic analysis using maps to visualize the Origin and destination cities.



In the above chart, I was created a line chart with green colour background and line is passed through the x- axis to y-axis with dotted black colour line.

And x-axis is the Origin City ,y-axis is Destination city.

Revenue and shipping cost trends over time.



In this above chart, I was created a pie chart. In this pie chart, x- axis is revenue and y-axis is shipping cost. Revenue and shipping cost trend over time.

Keys Performance Indicators (KPIs):

Key Performance Indicators (KPIs) are measurable values that demonstrate how effectively a company or organization is achieving key business objectives. In the context of transportation performance, KPIs help assess various aspects such as efficiency, reliability, safety, and cost-effectiveness. Here are some relevant KPIs for transportation performance along with their definitions and methods of calculation:

On-Time Delivery Performance:

Definition: The percentage of shipments or deliveries that arrive on time as scheduled.

Calculation: (Number of on-time deliveries / Total number of deliveries) x 100

Transit Time:

Definition: The average time taken for goods or passengers to travel between two points.

Calculation: Total time taken for transportation / Number of trips or shipments

Vehicle Utilization Rate:

Definition: The percentage of time that transportation vehicles are actively used compared to their total available time.

Calculation: (Total operational hours of vehicles / Total available hours) x 100

Fuel Efficiency:

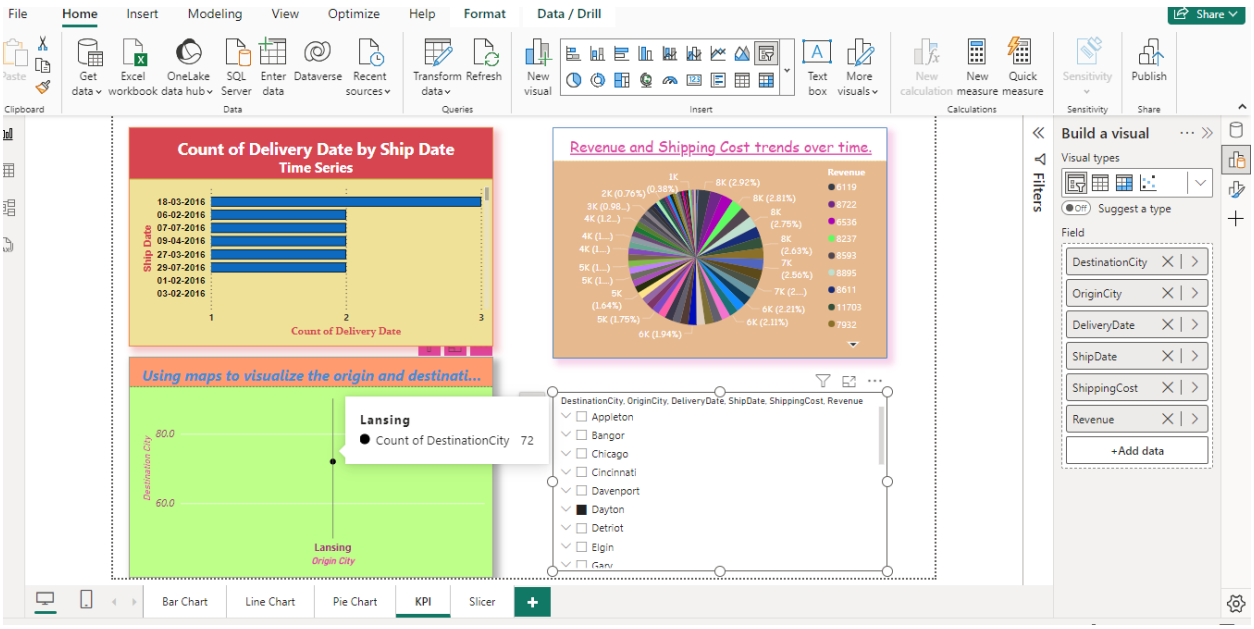
Definition: The measure of how efficiently fuel is used to transport goods or passengers.

Calculation: Distance traveled / Fuel consumed

Transportation Cost per Unit:

Definition: The average cost incurred to transport one unit of goods or passengers.

Calculation: Total transportation costs / Total units transported.



5.Filtering and Slicing:

Add Filters and Slicers:

a. In Power BI Desktop, navigate to the report page where you want to implement filtering and slicing.

b. From the Visualizations pane, locate the "Filters" and "Slicers" options.

c. Drag and drop the relevant fields (e.g., time period, categories, trip types) from your dataset into the "Filters" or "Slicers" pane.

d. Power BI will automatically create filter visuals based on the selected fields.

Customize Filters and Slicers:

a. Click on the filter visual to select it.

b. Use the formatting options in the Visualizations pane to customize the appearance of the filter, such as adjusting the layout, colors, and font size.

c. You can also customize the behavior of the filter by selecting options like single select or multi-select.

Enable Dynamic Data Exploration:

a. Once filters and slicers are added, users can interact with them to dynamically explore the data.

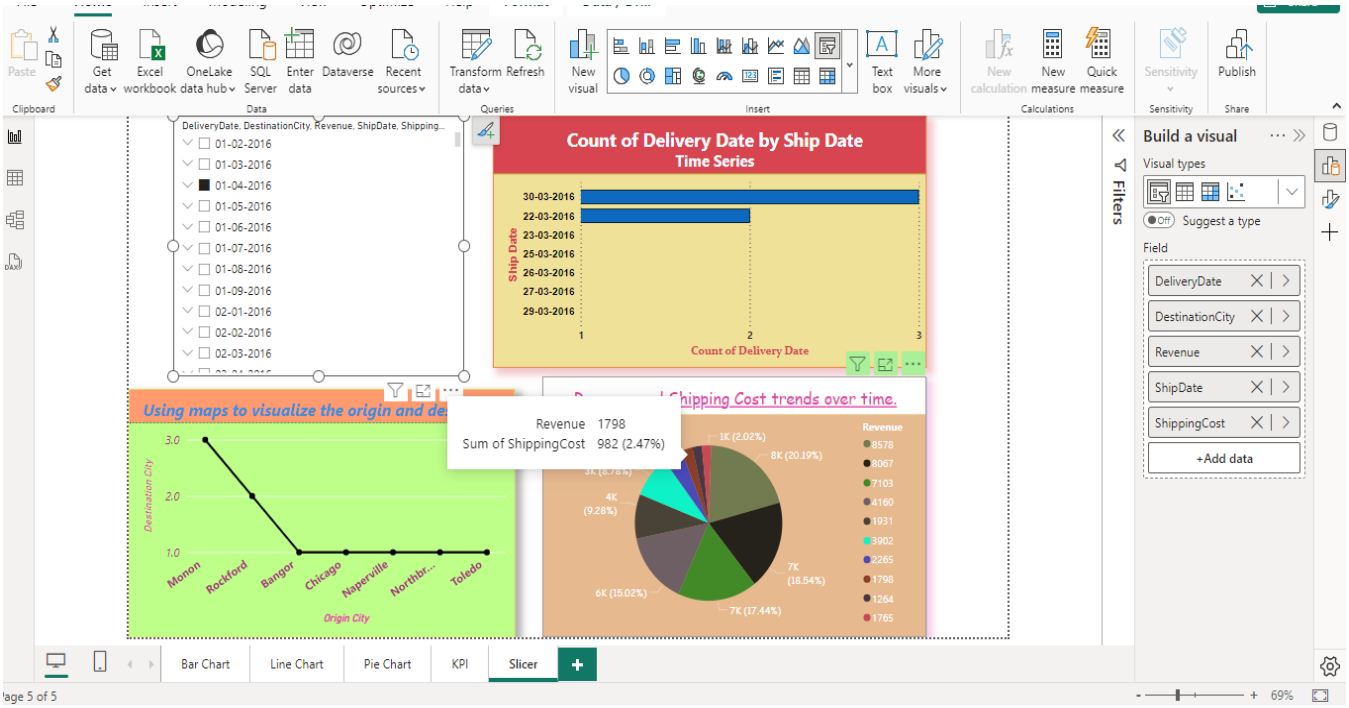
b. Users can select specific time periods, categories, or trip types by clicking on the options available in the filters and slicers.

c. The data displayed in other visuals on the report page will automatically update based on the user's selections, providing dynamic insights into the data.

Implement Date Slicers for Time Periods:

a. For time-based analysis, consider adding date slicers to allow users to filter data based on specific time periods (e.g., days, weeks, months, years).

b. You can use the built-in date slicer feature in Power BI by dragging the date field into the "Slicers" pane or create a custom date slicer using a slicer visual.



Thank you for giving this opportunity.