Power BI Dashboard Report for Retail Analytics

Objective: This report summarizes the steps, analyses, and insights provided in the Power BI dashboard created for a retail dataset. The dashboard addresses key business questions through dynamic and interactive visualizations.

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1. Top Categories by Total Price

Objective: Identify and visually represent the top 10 product categories by total sales.

Steps:

- Created a Calculated measure for total sales:
- `Total Sales = SUM(Order_Items[price])`
- Used a Stacked Column Chart to display the top 10 product categories by total sales.
- Added **Product_category_name_english** to the axis and Total Sales as values.

Insight: Displays the highest-performing product categories by sales.

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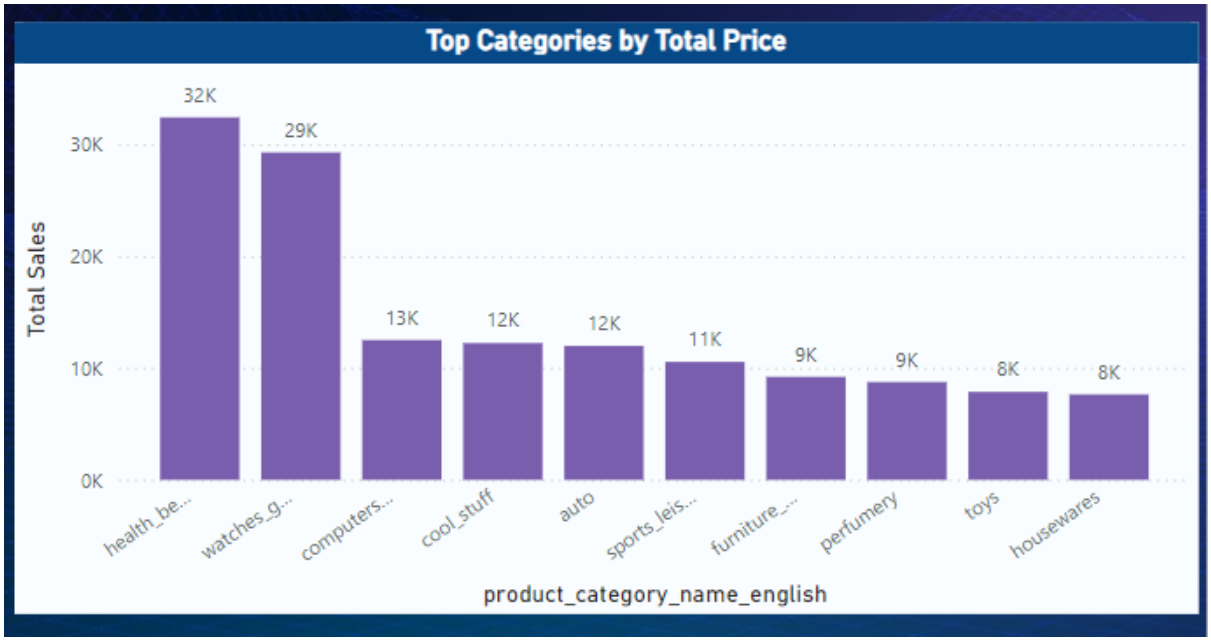

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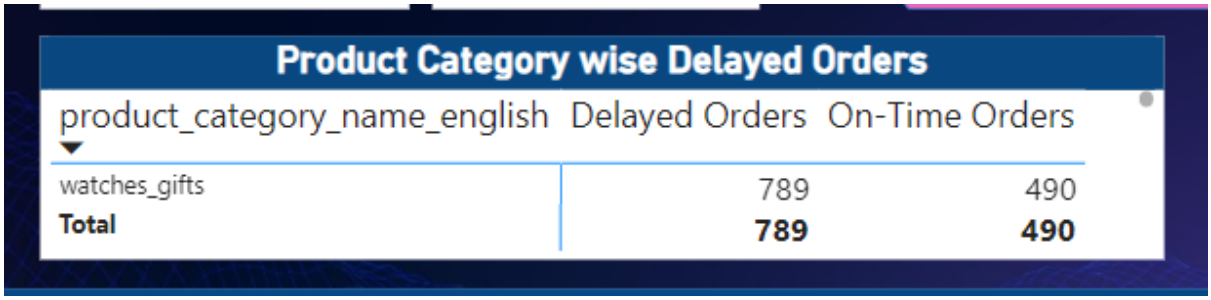
2. Delayed Orders Analysis

Objective: Determine the number of delayed orders in each category.

Steps:

- Created a Delayed Status column
- ```
  Delayed Status =
  IF(ISBLANK(Updated_orders_datase[order_delivered_customer_date]), "NA",
      IF(Updated_orders_datase[order_estimated_delivery_date] >
  Updated_orders_datase[order_delivered_customer_date],"Delayed", "IN TAT"))
  ```
- Created measures:
- ```
  Delayed Orders =
  CALCULATE( COUNT(Updated_orders_datase[order_id]), Updated_orders_datase[Delayed
  Status] = "Delayed")
  On-Time Orders = CALCULATE(COUNT(Updated_orders_datase[order_id]),
  Updated_orders_datase[Delayed Status] = "IN TAT")
  ```
- Used a Table with Product_category_name_english title and the count of delayed orders as values.

Insight: Identifies the product categories with the most delivery delays.



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3. Monthly Comparison of Delayed and On-Time Orders

Objective: Create a dynamic visual that compares the number of delayed orders to on-time orders for each month.

Steps:

- Created measures :
- ```
  On-Time Orders =
  CALCULATE(COUNT(Updated_orders_datase[order_id]),Updated_orders_datase[Delayed
  Status] = "IN TAT")
  ```
- Used a clustered column chart with `order_purchase_timestamp` and set to the month on the X- axis, and `Delayed Orders` and `On-Time Orders` on the Y- axis

Insight: Provides a comparative analysis of monthly delivery performance.
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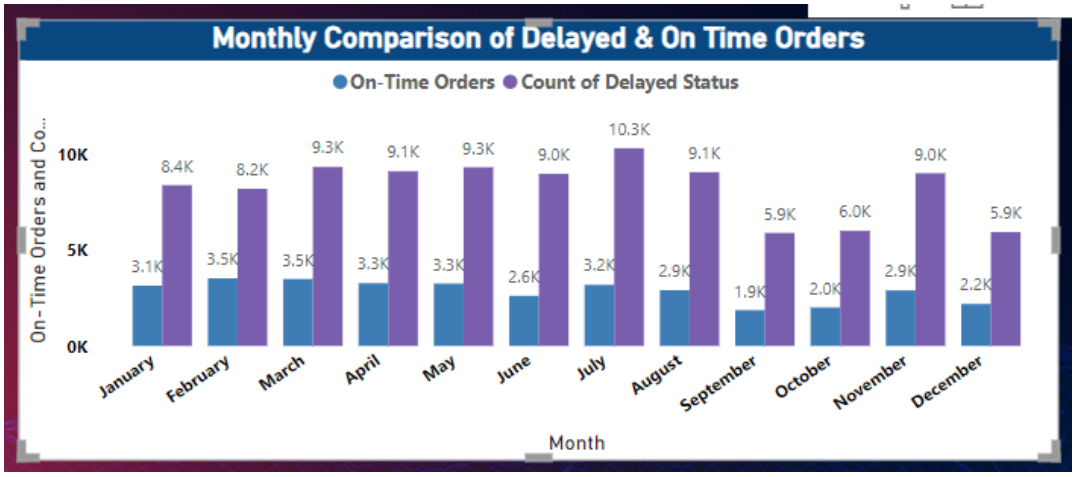

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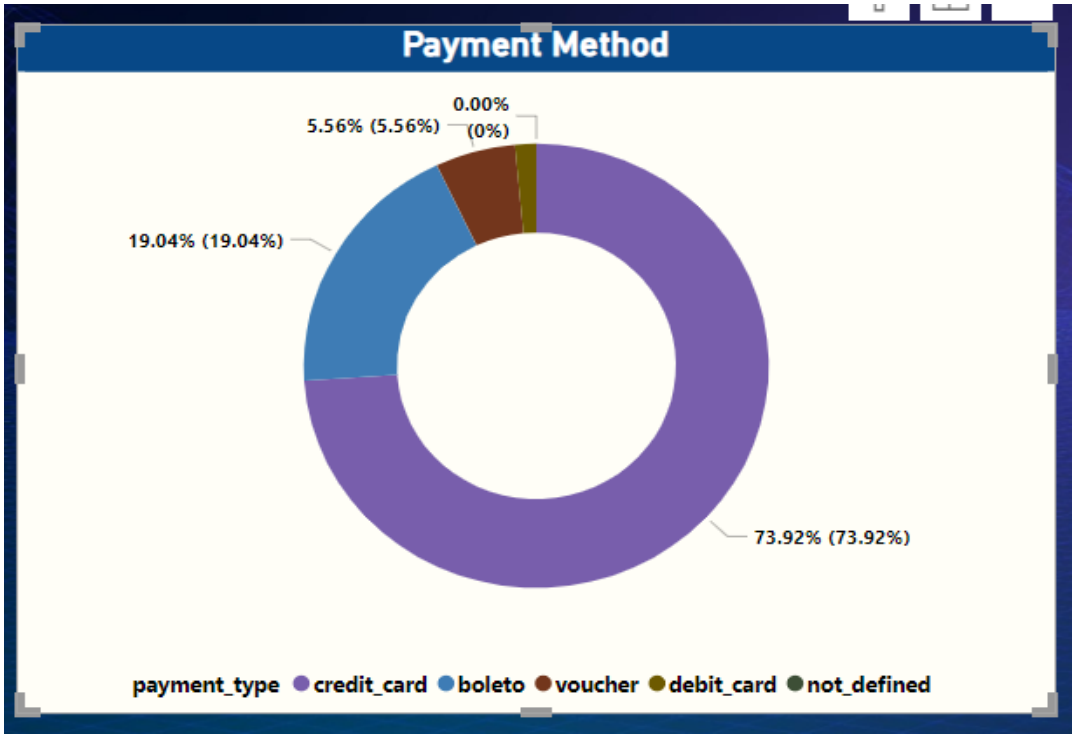
4. Payment Method Analysis

Objective: Analyze the most frequently used payment methods.

Steps:

- Used the `Payment_type` field from `Order_payments_dataset`.
- Created a Dount chart showing the count of each payment method.

Insight: Visualizes customer preferences for payment methods.



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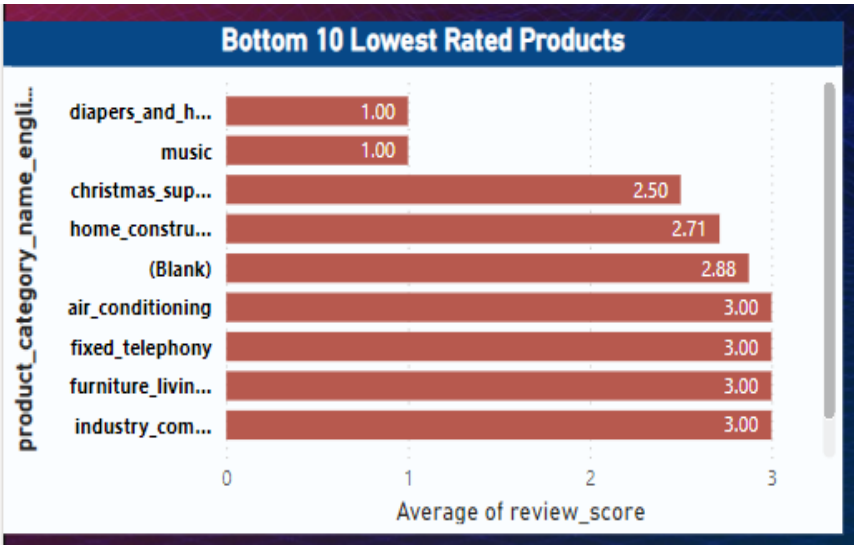
5. Product Rating Analysis

Objective: Identify the top 10 highest-rated and bottom 10 lowest-rated products.

Steps:

- Used two Clustered Bar Charts, one for the top 10 and another for the bottom 10 products by average rating.
- Use Review_score from Order_reviews_dataset and put at the X-Axis and Product-category_name_english at Y-Axis.

Insight: Highlights customer satisfaction levels.



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6. State-wise Sales Analysis

Objective: Identify states with high and low sales.

Steps:

- Used a map visual with Customer_state at the Location, Customer City at Legend and Latitude and longitude at their place Total Sales.
- Add the tooltip at the Map with to show the state and city wise sales.

Insight: Provides a geographical breakdown of sales performance.

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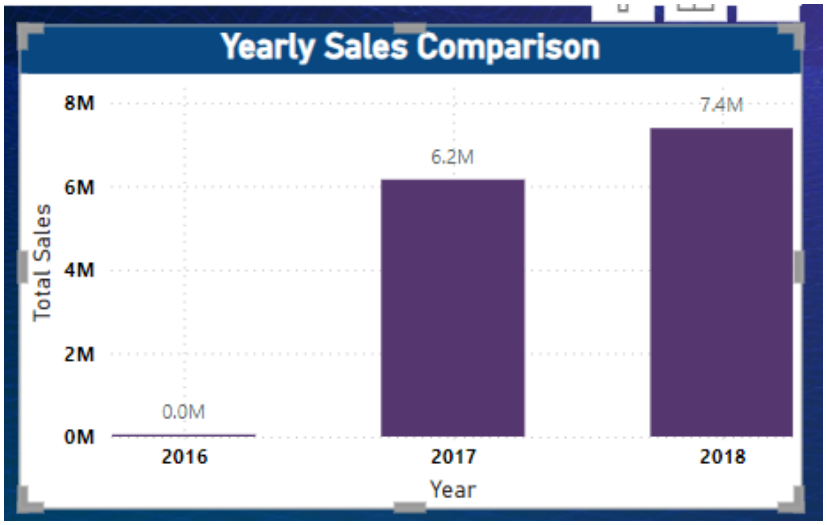
7. Seasonal Sales Patterns

Objective: Analyze seasonal sales trends quarterly.

Steps:

- Crate two Cluster Colum Chars
- Used order_purchase_timestamp as Quarter on the axis and Total Sales as values.
- Another Used order_purchase_timestamp as Yearly on the axis and Total Sales as values.

Insight: Displays sales trends by season.



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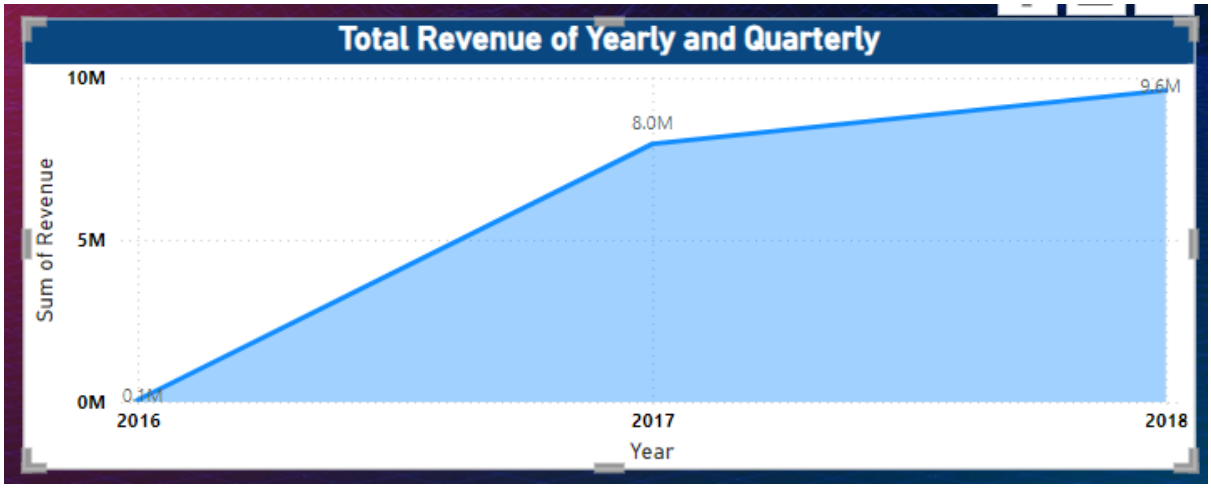
8. Revenue Analysis

Objective: Determine total revenue and analyze yearly trends.

Steps:

- Created a measure:
- `Total Revenue = SUM(Order_Items_dataset[Price]) + SUM(Order_Items_dataset[Freight_value])`
- Used a line chart to display revenue trends by year.

Insight: Reveals yearly revenue growth patterns.



Additional Features

- **Dropdown Slicers for Product Category and State:** To allow dynamic filtering of visuals by product_category_name and customer_state.
- **Cards for Total Sales and Total Orders:** To highlight key metrics at a glance.
- **Navigation with Shapes for Page Links:** Shapes are added as clickable elements that direct users to different pages for detailed views and analysis, enhancing the interactivity of the report.

Conclusion

This Power BI dashboard provides a comprehensive and interactive approach to analyzing key business metrics for the retail dataset. The inclusion of slicers