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🎯 Internship Project 2: Power BI Data Analysis – Retail

Organization: Rhives Technologies
Theme: Data Analysis Using Power BI (Week 2)
Dataset: Rhives_Retail_Project_DataSet

Business Scenario:
You are the head of sales for a retail products company. The company wants to increase its business across regions.

🟦 **Tasks to Perform** :

Part 1: Data Exploration and Preparation

- Data Exploration and Preparation

1. Data Import and Overview
   - Import the dataset into Power BI.
   - Provide a brief overview of the dataset, including the number of records and fields. Identify at least three key fields and describe their data types.

2. Data Cleaning
   - Check for and handle any missing or inconsistent data. For example, address any null values in key fields such as Sales or Profit.

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Part 2: Basic Visualizations

1. Sales by Region
   - Create a bar chart showing total sales by region.
   - What insights can you derive from this visualization regarding regional sales performance?

2 .Monthly Sales Trend
   - Create a line chart showing the trend of sales over time (monthly).
   - Analyze the trend and identify any significant changes or patterns in sales throughout the year.

3. Sales by Product Category
   - Create a pie chart showing the distribution of total sales by product category.
   - Which product category generates the highest sales, and which generates the lowest?

4. Profit by State
   - Create a map visualization that shows profit by state.
   - Highlight any states with unusually high or low profit and speculate on potential reasons for these anomalies.

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Part 3: Advanced Visualizations

1. Sales vs. Profit
   - Create a scatter plot to analyze the relationship between sales and profit.
   - Use color to represent different categories and size to show the volume of sales. What patterns do you observe in the relationship between sales and profit?

2. Customer Segment Analysis
   - Create a bubble chart that displays total sales by customer segment, with bubble size representing the profit.
   - Which customer segment is most profitable, and which segment has the highest sales volume?

3. Order Quantity Distribution
   - Create a histogram to show the distribution of order quantities.
   - Describe the distribution pattern and its implications for inventory management.

4. Create Calculated field
   - Create a bar chart using different measures to get statistics about the customers, broken down by region - Rename the sheet as Customer Statistics.

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Part 4: Creating Dashboards

1. Interactive Dashboard

- Combine at least three visualizations (e.g., Sales by Region, Monthly Sales Trend, Sales vs. Profit) into a single interactive dashboard.
- Add filter actions that allow users to select a region or product category to update all visualizations accordingly. Ensure the dashboard is intuitive and user-friendly.

2. Sales Performance Summary

- Design a dashboard that summarizes key performance indicators (KPIs) such as total sales, total profit, and average order value. Include visualizations and text descriptions.
- How can this dashboard help in making strategic business decisions?

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Part 5: Analysis and Reporting

1. Insights and Recommendations

- Write a brief report summarizing the key insights from your visualizations and dashboard.

Address the following questions:

- What are the main trends and patterns observed in the data?
- Are there any areas of concern or opportunities for growth?
- What recommendations can you make based on your analysis?

2. Presentation of Findings

- Prepare a presentation that includes screenshots of your visualizations and dashboard. Summarize the insights and key findings from your analysis.
- Explain the value of your visualizations and how they can be used to inform business decisions.

🧾 Deliverables

1. Submit the project in the Microsoft Teams week 2 Channel, in the form of a PDF of the project presentation and your worked Power BI File💻

2. Post your work on LinkedIn and Tag Rhives Technologies ✨