**REPORT**

1. **Executive Summary**

This report presents an in-depth analysis of sales trends, regional performance, and product category contributions using a range of visualizations, including bar charts, line graphs, and filled maps, etc. The findings from these visualizations offer valuable insights into the company's revenue generation patterns, payment methods, and product performance across different regions.

1. **Visualizations**

**Overview:**

The dashboard includes bar charts, pie charts, and line graphs to visualize sales trends, regional performance, and product performance.

**Key Visuals:**

1. **Total Revenue, Total Units Sold, Week-Over-Week % change, and Month and Week Slicers**

**Description:** Cards display Total Revenue, Total Units Sold, and the percentage increase or decrease compared to the previous week. Slicers allow users to view these details for specific time periods.

**Insight:** The insights include tracking weekly trends in revenue and units sold (increases or decreases) and summarizing monthly revenue and units sold for a quick overview.

1. **Revenue by Month**

**Description:** A Clustered Column chart showing the revenue by month.

**Insight:** The highest revenue was achieved in January, followed by a gradual decline in the subsequent months, with slight increases observed in March and August. These fluctuations could be attributed to promotions or changes in consumer behavior.

1. **Revenue by Product Category:**

**Description:** A Clustered Bar Chart displaying the revenue earned in each Product Category.

**Insight:** This chart showcases a clear comparison of performance across categories. The Electronics category generates the highest revenue, contributing 43% of the total revenue and earning 87% more than the second-highest contributor.

1. **Revenue by Week Number:**

**Description:** A line chart displaying the weekly revenue trend, highlighting patterns over time. Additionally, it can be used to forecast revenue for upcoming weeks based on data from previous weeks.

**Insight:** There are noticeable fluctuations in the weekly revenue generated. However, using this data, once the fluctuations are stabilized, we can forecast the revenue for the coming weeks with 99% confidence, which will aid in more effective supply and demand planning.

1. **Revenue by Payment Method:**

**Description:** A clustered bar chart displaying the revenue earned through each Payment Method.

**Insight:** Most of the revenue is earned through Credit Card payments, which generate twice as much revenue as PayPal and six times more than Debit Card payments.

1. **Revenue by Region:**

**Description:** A filled Map, showing the Total Revenue earned in each Region.

**Insight:** The highest revenue was generated from North America.

1. **Further Classification of Revenue by Region:**

**Description:** A Filled Map visualizing the regions, with tooltips providing additional details on the revenue generated from each Product Category within those regions.

**Insight:** The highest revenue-generating Product Category in North America is Electronics, in Asia it is Sports, and in Europe it is Home Appliances.

1. **Region wise Summary:**

**Description:** A table displaying a region-wise breakdown of Product Categories, including the total units sold and the total revenue earned for each category in each region. This allows for easy comparison of sales performance across regions and categories.

**Insight:** The insight drawn from this table is that, although the total number of units sold in the Electronics product category is lower, the revenue earned from this category is the highest.

1. **Average Unit Price:**

**Description:** A Line and Clustered Column Chart displaying the Average Mean Unit Price as the columns and the Median Unit Price as the line, allowing for a clear comparison of both metrics or across different categories.

**Insight:** In all the Product Categories, the data is right-skewed, with the Mean Average being higher than the Median. This indicates that there are more expensive products than cheaper ones, pulling the mean to the right.

1. **Payment Method in each Region:**

**Description:** A Clustered Bar Chart showing which Payment Method is primarily used in each Region.

**Insight:** The primary payment method in North America is Credit Card, PayPal in Europe and both Credit Card and Debit Card in Asia.

1. **Key Findings**

* The Highest Revenue generating Product Category is Electronics in North America followed by Home Appliances in Europe and then by Sports in Asia.
* There are noticeable fluctuations in the weekly revenue generated.
* The pricing data across product categories is right-skewed, with the Mean Average Unit Price higher than the Median, suggesting that more expensive products are pulling the average price upward.

1. **Recommendations**

* Increasing the Sample size of the Data would result in a more accurate and precise analysis and forecasts. Additionally, including the cost of each product will also give a clearer picture of which products are performing well in terms of both sales and profitability, helping to make more informed decisions.
* Conduct a deeper analysis into the fluctuations in sales and revenue. Identifying the underlying causes, such as seasonal changes, promotions, or external factors, will help in developing strategies to stabilize these fluctuations and optimize revenue consistency.
* Since Electronics is the highest revenue-generating product category, focusing on targeted promotions for these products in regions where their performance is lower could lead to increased revenue across all areas.
* As, most revenue comes from Credit Card transactions, offering incentives such as discounts, loyalty rewards, or exclusive deals for credit card users can drive even more purchases and foster customer loyalty. This will enhance the perceived value of choosing your business and increase revenue.