DataSpark: Illuminating Insights for Global Electronics

Done By,

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Problem Statement:

Global Electronics, a leading retailer of consumer electronics, has provided you with several datasets containing information about their customers, products, sales, stores, and currency exchange rates. The company seeks to leverage this data to better understand their business and identify areas for improvement. As part of Global Electronics' data analytics team, Provide Exploratory Data Analysis (EDA) valuable insights from the company's data. Your goal is to provide actionable recommendations that can enhance customer satisfaction, optimize operations, and drive overall business growth

Insights using SQL and Power-BI:

Removing and adding columns as necessary in the tables and preparing the database tables for Analysis.

Solution Approach:

- ❖ Data Import and Initial Analysis
- ❖ Connecting SQL Database to Power BI
- ❖ Data Modelling and Relationship Creation
- ❖ Data Cleaning and Transformation
- ❖ Dashboard Creation - Key Insights

STEPS FOR CLEANING DATA AND EDA:

- ❖ Import data from MySQL into Power BI.
- ❖ Create or establish relationships between tables using the model tab section in Power BI.
- ❖ Remove blank rows, columns and unnecessary columns in all the tables and also remove 0, and 1 in the sales amount column using the Power Query tool.
- ❖ The date column Change data type to date format.
- ❖ Add a new column option in the ribbon section, then go to the Date option and then select the Year option. So, Year column has been added
- ❖ There are various null values, errors and missing values in the columns which can be deleted using various options in Power BI

Data Analysis using SQL and PowerBI:

- ❖ High revenue earned from Male customers
- ❖ Highest Revenue earned from the product WWI Desktop
- ❖ Most liked brand from the customer's perspective is Contosco brand
- ❖ Highest number of customers from North America Continent
- ❖ United States own highest stores
- ❖ Highest product ordered – Computers
- ❖ Toronto city owns high number of customers

Expected Outcome:

By implementing the above solution approach, would be able to provide the below assistance:

- ❖ Enhanced Data Analysis: The connection between the SQL database and Power BI enables real-time analysis of the sales trend. The solution provides users with the ability to explore and analyze data more effective.
- ❖ Improved Decision Making: The creation of the dashboards provide comprehensive view of the sales trend from different perspectives. This enables informed decision making, such as identifying profitable products, optimizing pricing strategies.

❖ Increased Efficiency: By utilizing Power BI's data transformation features, data cleaning and transformation tasks are streamlined. This saves time and effort, allowing users to focus more on analysing the data.
❖ Revenue Growth: With the ability to access key insights, analyze profitability, and monitor performance effectively, contributes to identifying growth opportunities and implementing effective strategies

Conclusion:

❖ Based on over all dashboard analysis , It has been found that business should focus more on month wise revenue, During December month Customers order huge number quantity of product. Sustain the level of order for the following year, hence product availability should be maintained.
❖ Out of top 10 , first 7 products give high revenue from the Product - desktop, not much difference for LCD and Water heater. If the business Improve the marketing strategy for other two products.
❖ Being rapid growth in technology world, there is huge demand for computers, Top level revenue from Computers. There is a equal proportion to bring the revenue of cell phones as top1.
❖ Interesting fact is highest revenue from United states, but customer count is high on Canada. If the business focus more on Canada city we can easily achieve the equal revenue like United States. Both U.S and Canada belongs to North America continent