

Adventure Works

Introduction

This project's objective is to investigate and analyze the Adventure Works dataset using Microsoft Power BI. This endeavor will enable me to gain insight into sales performance and customer behavior, enabling me to assist Adventure Works in making data-driven decisions.

I began by importing the tables into Power BI, then examined the dataset for missing values and errors that could affect my Power BI visualizations. Regarding the data model, Power BI created the relationship automatically to simplify the process. I began the visualization to analyze Sales Performance, Product Analysis, and Customer Segmentation after investigating the dataset and the relationship between the tables.

Visualizations

For the visualizations, I explored relationships between different columns on all tables in three categories: Sales performance, Product Analysis, and Customer segmentation.

Sales Performance

I visualized total sales by month to check the trend over time. The second visualization is to know the average order quantity by the customers. The third one explored the relationship between sales amount, product category, and product sub-category. At the same time, the last one showed the sum of revenue. To visualize total revenue, I created a new column with a new measure that multiplies unit price by order quantity.

Product Analysis

The product with the highest number of quantity orders is the "Water Bottle – 30 oz". Customers have ordered a total of 4244 of the water bottles, with the next product (patch kit/8 patches) having 3191 quantities ordered. The third one is "Mountain Tire Tube," with 3095 quantities ordered. In addition, I visualized the product according to different regions.

Customer Segmentation

I input a new measure in the DAX to segment customers into "Loyal" and "OneTime Buyer." Most of the customers are loyal, with the majority of them in "North America" and then "Europe."

Recommendations

From the visualizations, I recommend that Adventure works focus more on the "North America" region and "Europe." They should work on expanding their reach to other regions where they have little or no presence. In addition, they should focus on the first three products (Water

Bottle, Patch kit/8 patches, and Mountain Tire Tube) while they can offer more discounts on other products to attract more customers.