Super Store Sales Report

Project Overview

This project involves a comprehensive analysis of a "Super Store" dataset to track sales performance, understand customer behavior, and forecast future sales. Using **Power BI**, I transformed raw sales data into an interactive dashboard and applied time-series forecasting to predict sales for the next 15 days.

Data Cleaning & Preprocessing

Before building the dashboard, I performed extensive data cleaning to ensure accuracy and reliability:

- **Duplicate Removal:** Identified and removed duplicate records to prevent overcounting of sales.
- **Date Standardization:** Corrected errors in the Order Date and Ship Date columns, ensuring all dates were in a uniform format for time-series analysis.
- **Data Type Correction:** Ensured numerical values (Sales, Profit, Quantity) were correctly typed to allow for mathematical aggregations.
- **Handling Missing Values:** Checked for and resolved null values in key columns like Region, Category, and Segment.

Dashboard Key Features & Insights

1. Executive Summary (KPIs)

- **Total Sales:** $445.43K
- **Total Profit:** $59.45K
- **Key Growth:** The dashboard shows a significant year-over-year growth comparing 2019 and 2020.

2. Sales Distribution

- **Segment Performance:** The **Consumer** segment is the primary driver of revenue, accounting for nearly **48%** ($213.25K) of total sales.
- **Product Categories:** Office Supplies and Technology lead in sales volume, with Phones and Chairs being the top-performing sub-categories.

- **Payment Preferences:** Customers prefer **Cards** and **Online** payments, which together make up over **77%** of transactions.

3. Geographical Analysis

- The interactive map visualizes sales by state, allowing stakeholders to identify high-performing regions (East and West coasts) and areas with growth potential.

4. Time-Series Trends

- The "Sales by Month and Year" chart highlights a seasonal peak in the first quarter and a steady increase in volume during the latter half of 2020 compared to 2019.

Sales Forecasting

I implemented a time-series forecasting model to predict sales for the **next 15 days**.

- **Methodology:** Used Power BI's built-in forecasting (exponential smoothing) to analyze historical daily sales patterns.
- **Trend Analysis:** The forecast accounts for the volatility seen in daily sales, providing the store with a data-driven estimate to manage inventory and staffing for the upcoming two-week period.

Tech Stack Used

- **Data Visualization:** Power BI
- **Data Cleaning:** Power Query (M Language)
- **Forecasting:** Power BI Time Series Forecasting
- **Data Source:** Super Store Sales Dataset (CSV/Excel)

How to Use

1. Download the .pbix file from this repository.
2. Open it using **Power BI Desktop**.
3. Use the "Region" slicer at the top of the dashboard to filter data by Central, East, South, or West.