Adidas Sales Analysis Report

1. Introduction

The Adidas Sales Analysis aims to analyze sales performance and generate insights that support data-driven decision-making. By leveraging SQL for data cleaning and MySQL Workbench for querying, we transformed raw sales data into meaningful insights. The final visualization was created using Power BI to present key trends and performance metrics in an interactive manner.

2. Dataset Overview

Source and Structure:

- The dataset contains Adidas sales data, including details on sales, regions, products, retailers, and customer demographics.
- Key columns in the dataset:
    - `Date`: Sales transaction date
    - `Region`: Geographic area of sales
    - `Retailer`: Store selling Adidas products
    - `Product Category`: Footwear, Apparel
    - `Sales Units`: Number of units sold
    - `Revenue`: Total sales amount
    - `Profit`: Profit earned from sales
    - `Sales Method`: Online, In-store, or Outlet
    - `Gender`: Male or Female customers

3. Data Cleaning and Preparation

Performed in **MySQL Workbench**:

- **Handled Missing Values:** Used SQL queries to identify and fill missing values appropriately.
- **Removed Duplicates:** Ensured there were no duplicate records using `DISTINCT` and `GROUP BY`.
- **Formatted Data Types:** Converted numerical columns to appropriate data types.
- **Standardized Values:** Ensured consistency in categorical values (e.g., `Online`, `In-Store`, `Outlet`).
- **Created New Fields:** Calculated key metrics like `Avg Price Per Unit` and `Profit Margin`.

4. Data Analysis & Insights

Key insights derived using **SQL queries in MySQL Workbench**:

- **Total Sales & Profit:**
  - Total sales revenue: **900M**
  - Total profit: **332M**
  - Total units sold: **2M**
- **Top Performing Retailers:**
  - `West Gear` and `Foot Locker` had the highest sales.
- **Sales by Region:**
  - The **West region** contributed the most to sales revenue.
- **Sales by Product Category:**
  - **Footwear** accounted for **66.34%** of sales, dominating the market.
- **Sales by Method:**
  - **In-store sales** made up **39.63%**, followed by **Online (32.85%)** and **Outlet (27.52%)**.
- **Sales by Month & Quarter:**
  - Peak sales occurred in **July and Q3**, while **Q1** had the lowest sales.
- **Gender-based Sales Trends:**
  - Slightly more sales were recorded for **male customers (54.03%)** than females (45.97%).

5. Dashboard Development in Power BI

The insights were visualized in an interactive **Power BI Dashboard**, containing:

1. **KPI Cards** – Displaying key metrics (Total Sales, Units Sold, Profit, Avg Price, Avg Profit %)
2. **Bar Charts** – Showing top retailers and sales by region
3. **Pie Charts** – Sales distribution by category and sales method
4. **Line Chart** – Monthly sales trend
5. **Map Visualization** – Sales distribution across different states and retailers
6. **Filters & Slicers** – Allowing users to filter by Region, Year, and Retailer

6. Business Recommendations

Based on the insights from the dashboard, the following actions are suggested:

1. **Boost Online Sales** – Online sales are significant but can be increased through targeted promotions.
2. **Expand in High-Growth Regions** – West and Northeast regions drive the most sales, making them ideal for further expansion.
3. **Optimize Seasonal Inventory** – Ensure higher stock availability during peak months (July, Q3).
4. **Strengthen Retail Partnerships** – Focus on high-performing retailers like `West Gear` and `Foot Locker` for growth.
5. **Target Female Customers** – Female customers contribute more to sales, so marketing campaigns can be customized accordingly.

7. Conclusion

This project successfully transformed raw Adidas sales data into actionable insights through SQL-based data cleaning and Power BI visualizations. The dashboard provides a clear overview of sales trends, regional performance, and key metrics, enabling strategic decision-making for better business performance.

8. Future Enhancement

- Implement advanced forecasting models to predict future sales trends.
- Integrate real-time data updates into the dashboard.
- Conduct further customer segmentation for personalized marketing strategies.