Walmart Sales Analysis (20102012) Data Cleaning, SQL Insights & Tableau Dashboard

Project Title:

Objective:

To explore and analyze Walmarts weekly sales data across various stores in the U.S. using Python (pandas), SQL, and Tableau and build an interactive dashboard that showcases business insights.

Tools Used:

- Python (Pandas) for cleaning and formatting raw CSV data

- MySQL for querying and aggregating sales insights

- Tableau Public for visualizing key patterns and trends

Steps Taken:

1. Data Cleaning (Pandas):

   - Handled inconsistent date formats

   - Removed duplicates

   - Exported cleaned data to a CSV file for SQL import

2. SQL Analysis:

   - Calculated total sales across all stores

   - Found top-performing and worst-performing stores

   - Compared average sales during holidays vs. non-holidays

   - Explored the relationship between fuel prices, CPI, and unemployment with sales

3. Dashboard Creation (Tableau):

  - Built an interactive dashboard to visualize:

   - Total sales by store

   - Weekly sales trend over 3 years

   - Impact of holidays on average sales

   - Correlation between fuel price and sales

   - Best and worst performing sales weeks

 Key Insights:

- Total sales across all stores exceeded $6.7 billion

- Store 20 had the highest total sales (~$301M)

- Holidays slightly boosted average sales

- Fuel price showed no strong correlation with weekly sales

- Peak sales week: December 24, 2010

 Skills Demonstrated:

- Data cleaning with Python

- Writing SQL for business insights

- Designing Tableau dashboards with filters, tooltips, and trend lines

 Live Dashboard:

[Insert Tableau Public Link here]

 Created by:

Atchudan (Data Analyst in Progress)