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

Project Title:

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

Objective:

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

Tools Used:

- Python (Pandas)for cleaning and formatting raw CSV data
- MySQLfor querying and aggregating sales insights
- Tableau Publicfor 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:

https://public.tableau.com/app/profile/atchudan.s/viz/walmart_sales_17486236076640/Dashboard1?publish=yes

Created by:

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