Sales Analysis of Electronics in the United States

📊 Overview

This project focuses on analyzing electronic sales data in the US using Python. The goal is to uncover sales trends, identify top-performing products, and provide actionable insights through data visualization.

🚀 Features

- Merging multiple monthly sales datasets into a single consolidated file
- Data cleaning and preprocessing for accurate analysis
- Exploratory Data Analysis (EDA) with insightful visualizations
- Trend analysis to identify peak sales periods, best-selling products, and regional sales performance

🔍 Key Insights

- **Peak Sales Months:** December, October, and April show the highest sales due to events like Christmas, Black Friday, and tax refunds. Businesses can boost revenue through targeted marketing, exclusive discounts, and product bundles during these months.
- **Top Performing Cities:** San Francisco and Los Angeles dominate sales due to high population density, strong tech presence, and higher disposable incomes. In contrast, Portland and Austin have lower sales, influenced by eco-conscious consumer behavior and fewer high-end retail outlets.
- **Sales Timing:** Sales peak during specific hours of the day, offering businesses an opportunity to optimize marketing campaigns and promotional strategies around high-traffic times.

🛠️ Technologies Used

- **Python** for data analysis
- **Pandas** for data manipulation
- **Matplotlib & Seaborn** for data visualization

📈 Project Workflow

1. **Data Collection:** Merging multiple CSV files into one dataset
2. **Data Cleaning:** Handling missing values and correcting data types
3. **Feature Engineering:** Adding new columns (Month, Sales, City, Hour) for deeper insights
4. **EDA & Visualization:** Using bar charts and line plots to identify trends and patterns