Retail Performance Analysis — *Report*

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Introduction :

Retail businesses often face challenges in managing sales, profit, and customer behavior. Analyzing data-driven insights helps businesses to understand areas of growth and loss. In this project, we analyzed retail sales data to discover trends, profitable categories, and areas needing improvement.

Abstract :

The objective of this project was to analyze retail data from a Superstore to identify profitable and loss-making categories, seasonal patterns, and regional performance. We used data visualization techniques to better understand the data and derive actionable business insights. The results help in making informed decisions for improving profitability.

Tools Used :

- **Python**
- **Pandas** (for data handling)
- **Matplotlib** and **Seaborn** (for visualization)
- **Google Colab** (for coding and execution)
- **GitHub** (for project storage)

Steps Involved in Building the Project :

Data Import : Loaded the Superstore dataset into a Pandas DataFrame.

Data Cleaning : Checked for null values and removed unnecessary columns.

Data Visualization : Created graphs to show relationships between sales, profit, and different categories.

Insights Generation : Observed patterns like loss-making categories, profitable months, and regional performance.

Saving Work : Uploaded the final notebook to GitHub for easy access and sharing.

Conclusion

From the analysis, we found that the Furniture category and subcategories like Tables and Bookcases are making losses despite good sales. Technology emerged as the most profitable category. Seasonal patterns indicated that December had comparatively lower sales. Regional analysis showed that the Western region needed strategic improvement. These insights can guide the store to optimize operations, focus on profitable areas, and improve weaker zones.