Amazon Sales Data Analysis Project Report

Introduction

This project involved the comprehensive analysis of Amazon's global sales data to extract key business insights. It aimed to understand trends in profit, revenue, and cost across countries, regions, item types, and time.

Abstract

The dataset included raw sales records and was cleaned for consistency and accuracy. Exploratory Data Analysis (EDA) was performed using Python, SQL queries were executed to extract relevant metrics, and the results were visualized through an interactive Power BI dashboard. The dashboard highlights revenue, profit, cost, and quantity sold, along with performance breakdowns by time, region, product type, and order priority.

Tools Used

- Python (Pandas, Matplotlib, Seaborn)
- Power BI
- SQL Server
- Microsoft Excel

Steps Involved in Building the Project

1. Cleaned raw dataset to remove duplicates and fix date formats.
2. Conducted EDA in Python using 'EDA.ipynb' to understand distributions and correlations.
3. Performed SQL queries for grouping and aggregating key performance indicators.
4. Built Power BI dashboard to visualize total profit, revenue, and region-wise contributions.
5. Interpreted visual insights such as high profits in Sub-Saharan Africa and peak sales in February and December.

Conclusion

This analysis provided a data-driven view of Amazon's sales trends. Cosmetics emerged as the most profitable item type, while Sub-Saharan Africa was the most profitable region. The findings can support strategic decisions on inventory, marketing, and supply chain planning.