Amazon Sales Analysis - EDA Report

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This report summarizes the exploratory data analysis (EDA) performed on the Amazon Sales dataset. It covers dataset structure, cleaning steps, visual exploration, and key findings.

1. Dataset Overview

The dataset contains information on Amazon sales transactions, including:

- Region, Country, Item Type

- Sales Channel, Order Priority

- Order Date, Ship Date, Order ID

- Financial details such as Units Sold, Unit Price, Unit Cost, Total Revenue, Total Cost, and Total Profit.

Below is a sample of the dataset:

Region: Australia and Oceania | Country: Tuvalu | Item: Baby Food | Sales Channel: Offline | Order Priority: H | Order Date: 5-28-2010 | ...

Region: Central America and the Caribbean | Country: Grenada | Item: Cereal | Sales Channel: Online | Order Priority: C | Order Date: 8-22-2012 | ...

2. EDA Process

Steps performed during the EDA:

1. Data Cleaning: Removed duplicates, handled missing values, and standardized date formats.

2. Descriptive Statistics: Reviewed summary metrics for numerical fields.

3. Visualization: Created charts to analyze sales distribution by region, item type, and sales channel.

4. Outlier Detection: Identified unusual sales and profit values.

5. Correlation Analysis: Checked relationships between numerical variables such as Unit Price, Unit Cost, and Total Profit.

3. Key Findings

- The most frequently sold items include Baby Food, Cereal, and Office Supplies.

- North America and Sub-Saharan Africa have the highest sales volumes.

- Online sales dominate in some regions, while offline sales are more common in others.

- High-profit margins observed for certain product categories.

- Seasonal trends were visible in sales, particularly for certain food products.

4. Conclusion

The EDA provided valuable insights into Amazon sales patterns. The results can inform inventory planning, marketing strategies, and regional sales focus areas. Further predictive modeling could forecast future demand and optimize operations.