**Amazon Sales Analysis Dashboard**

**Project Overview**

* **Title:** Amazon Sales Analysis Dashboard
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**Introduction**

* **Objective:** The purpose of this project is to analyze Amazon sales data to identify key trends and insights that can help in making data-driven decisions.
* **Scope:** This document covers the data sources, data preparation, dashboard features, and key insights derived from the analysis.

**Data Sources**

* **Data Source 1:** Amazon (CSV/Database)
* **Data Source 2:** Amazon-fashion YT (CSV/Database)

**Data Preparation**

* **Data Cleaning:**
  + Handled missing values by using mean imputation for numerical data and mode imputation for categorical data.
  + Removed duplicate records to ensure data integrity.
* **Data Transformation:**
  + Created new calculated columns for derived metrics such as total sales, return rate, and average rating.
  + Aggregated sales data by city, state, and date for analysis.

**Dashboard Design**

**Overview Page**

* **Features:**
  + **Sales by City:** Bar chart showing sales distribution across different cities.
  + **Sales by State:** Bar chart illustrating sales distribution across states.
  + **Sales by Date:** Line chart showing sales trends over time.
  + **Slicers:**
    - Products: Filter sales data by specific products.
    - Status: Filter data by sales status (e.g., completed, pending).
    - Sales and Units: Filter by sales amount and number of units sold.
  + **KPIs:**
    - Overall Sales: Total sales amount.
    - Filter Sales: Sales amount based on applied filters.
    - Seller Count: Number of sellers.
  + **Navigation:**
    - Page navigator for easy access to different dashboard pages.
  + **Search Bar:** Allows searching for any product.

**Products Page**

* **Features:**
  + Displays all products in a tabular format.
  + **Tooltip:**
    - Shows detailed information when a specific product is hovered over.
    - Includes product description, total sales, units sold, return rate, and reviews.
    - Area chart showing units sold over time.

**Products View Page**

* **Features:**
  + Clicking on any product shows detailed information in a separate box.
  + **Details:**
    - Product description.
    - KPIs for the selected product.
    - Area chart showing units sold over time.
  + **Date Slicer:** Allows choosing a specific time period for analysis.

**Key Insights**

1. **Sales Trends:**
   * **Sales by Date:** The sales remains dynamic, constantly changing.
   * **Sales by City and State:** High sales volume in metropolitan areas compared to rural regions.
2. **Sales Performance:**
   * Out of 89.08M of Sales, 22.14M of Sales are delivered to buyer, out for delivery or shipping.
   * 6.37M of Sales are cancelled, pending, shipped but damaged, shipped but rejected by buyer, returned to seller or returning to seller.
3. **Products Management:**
   * **Products lost:** 890 products were lost in Transit which are men’s caps, women sarees and tops.
   * **Sales Units by Date:** Seasonal products showed significant variation in units sold over different periods.

**Learnings**

* **Data Cleaning and Transformation:** Gained practical experience in handling real-world data issues such as missing values and data duplication.
* **Power BI Features:** Enhanced skills in using Power BI functionalities such as creating interactive visualizations, using tooltips, and implementing slicers.
* **Data Analysis:** Improved ability to analyze large datasets to extract meaningful insights and trends.
* **Dashboard Design:** Learned best practices for designing user-friendly and interactive dashboards.

**Recommendations**

Based on the insights derived, it is recommended to focus on improving product management for top-selling products, enhancing customer satisfaction to reduce return rates, and leveraging sales trends for better marketing strategies.