**The high impact skills development program**

**( AI – DS)**

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**SECTION 02**

**PHASE II**

**Roll NO 103**

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# ****1. Executive Summary****

This report analyzes the Amazon dataset using visualizations such as maps, bar charts, line charts, donut charts, and tables. The objective is to uncover trends and patterns that can guide strategic business decisions on customer behavior, product performance, and sales distribution.

# ****2. Introduction****

## ****2.1 Objective****

The goal of this analysis is to examine Amazon's dataset, extract key insights, and present them through interactive visualizations focusing on sales performance, product popularity, and regional trends.

## ****2.2 Dataset Overview****

* **Source**: Amazon product and sales data
* **Features**: Product ID, name, category, sales volume, price, customer reviews, ratings, and geographic information
* **Size**: [Number of records/attributes]
* **Time Period**: [Data coverage period]

# ****3. Data Visualization Process****

## ****3.1 Exploring the Dataset****

Initial exploration involved understanding the dataset's structure, key attributes, and identifying potential anomalies. Important fields such as regional sales, customer ratings, and product categories were extracted.

## ****3.2 Map Visualization****

The map displays sales distribution across regions. Insights include:

* **Highest sales**: [Region X]
* **Lower engagement**: [Region Y]

Insert Map Here

## ****3.3 Stacked Bar Chart****

The stacked bar chart compares product category sales performance over time. Key findings include:

* Significant growth in [Category A] and [Category B]
* Seasonal trends in [Category C]

Insert Stacked Bar Chart Here

## ****3.4 Multiple Line Chart****

The line chart tracks product sales and reviews over time, showing:

* A positive correlation between reviews and sales for [Product X]
* Declining reviews for [Product Y] despite steady sales

Insert Line Chart Here

Table Bar chart

## ****3.5 Horizontal Stacked Bar and Bar Charts****

Horizontal bar charts show product distribution across categories:

* **Dominant product**: [Product A] in [Category X]
* **Poor performer**: [Product B] in [Category Y]

Insert Horizontal Bar Chart Here

### ****3.6 Donut Chart****

The donut chart visualizes the market share of different product categories:

* **Largest share**: [Category A]
* **Growth potential**: [Category B] and [Category C]

Insert Donut Chart Here

### ****3.7 Highlight Tables****

Highlight tables show product performance metrics like ratings and sales:

* [Product X] has high ratings and strong sales
* [Product Y] has many reviews but low sales

Insert Highlight Table Here

### ****3.8 Text Sheets****

Text sheets summarize the key findings:

* [Region X] performs strongly
* Trends in [Category A] are notable

Insert Text Sheets Example Here

## ****4. Dashboard Creation****

The visualizations were compiled into an interactive dashboard, allowing users to filter data by region, category, and time period. The dashboard offers dynamic updates based on user interaction.

Insert Dashboard Screenshot Here

## ****5. Conclusion****

The analysis of the Amazon dataset uncovered valuable insights into sales trends, customer behavior, and product performance. Visualizations provided clear data-driven insights to inform strategic decisions.

### ****5.1 Key Takeaways****

* Strong sales in [Region X] with potential for growth in [Region Y]
* Top-performing categories: [Category A] and [Category B]
* Seasonal fluctuations noted in multiple categories
* Product reviews directly impact sales performance

## ****6. Recommendations****

Based on the findings:

* Increase marketing in underperforming regions like [Region Y]
* Focus on growing product categories with potential, such as [Category C]
* Utilize positive reviews to boost sales for products like [Product X]

## ****7. References****

[List your sources here, such as datasets, academic references, and any other material used.]

## ****8. Appendices****

[Include additional charts, tables, or detailed calculations here.]