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INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Category - I Deemed to be University) Porur, Chennai
SRI RAMACHANDRA FACULTY OF ENGINEERING AND TECHNOLOGY

CSE 260- DATA VISUALIZATION TOOLS AND TECHNIQUES

CA-4 ASSIGNMENT

SUBMITTED BY

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BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING

(Artificial Intelligence and Data Analytics)

Sri Ramachandra Faculty of Engineering And Technology
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DATASET:

E-Commerce Sales- The dataset for this project is a comprehensive collection of sales orders, designed to provide a detailed view of various aspects of the sales process. It includes 24 columns, each offering specific insights into different dimensions of the sales transactions. Key identifiers like Order ID and Customer ID help in tracking individual orders and customer interactions. Temporal data points such as Order Date, Ship Date, and order year/month allow for trend analysis and performance tracking over time. The inclusion of demographic information, such as City, State, Country, and Region, enables geographic segmentation and market analysis. Additionally, customer-related data such as Customer Name and Segment provide deeper understanding of customer demographics and behavior.

Furthermore, the dataset contains detailed product information, including Product ID, Category, Sub-Category, and Product Name, which is essential for product performance analysis. Financial metrics such as Sales, Profit, Discount, and Shipping Cost help in evaluating the financial health of the business and identifying areas for improvement. Operational aspects are captured through columns like Ship Mode, Order Priority, and Delivery Days, which can be used to assess and enhance supply chain efficiency. Overall, this dataset is well-suited for creating a comprehensive and insightful Tableau dashboard that will enable stakeholders to make data-driven decisions and strategize effectively.

STORYBOARD:

Sales Performance Analysis Story Board
Total Sales By Country
Highest Sold Category
Total sales By Ship Mode
Profit & Discount Trends
Total Sales By Market
Discounted Sales For Each Category
Total Sales Performance
Sales
19
2M
Canada
66,729
United States
22,91,304
Mexico
6,20,277
Trinidad and Tobago
6,664
Peru
17,753
Brazil
3,59,144
Argentina
57,315
Sweden
80,388
Ireland
16,586
Lithuania
6,701
Russia
82,721
Kazakhstan
4,558
Mongolia
6,771
Tajikistan
242
China
6,99,613
South Korea
33,981
Western Sahara
666
Chad
1,310
United Arab Emirates
737
Philippines
1,83,069
Sri Lanka
849
Singapore
40,315
Papua New Guinea
2,916
Democratic Republic of the Congo
87,224
Zimbabwe
3,725
South Africa
94,443
Australia
9,23,807
New Zealand
1,21,70
The Highest Sales are from United States and the least sales are from Laos.
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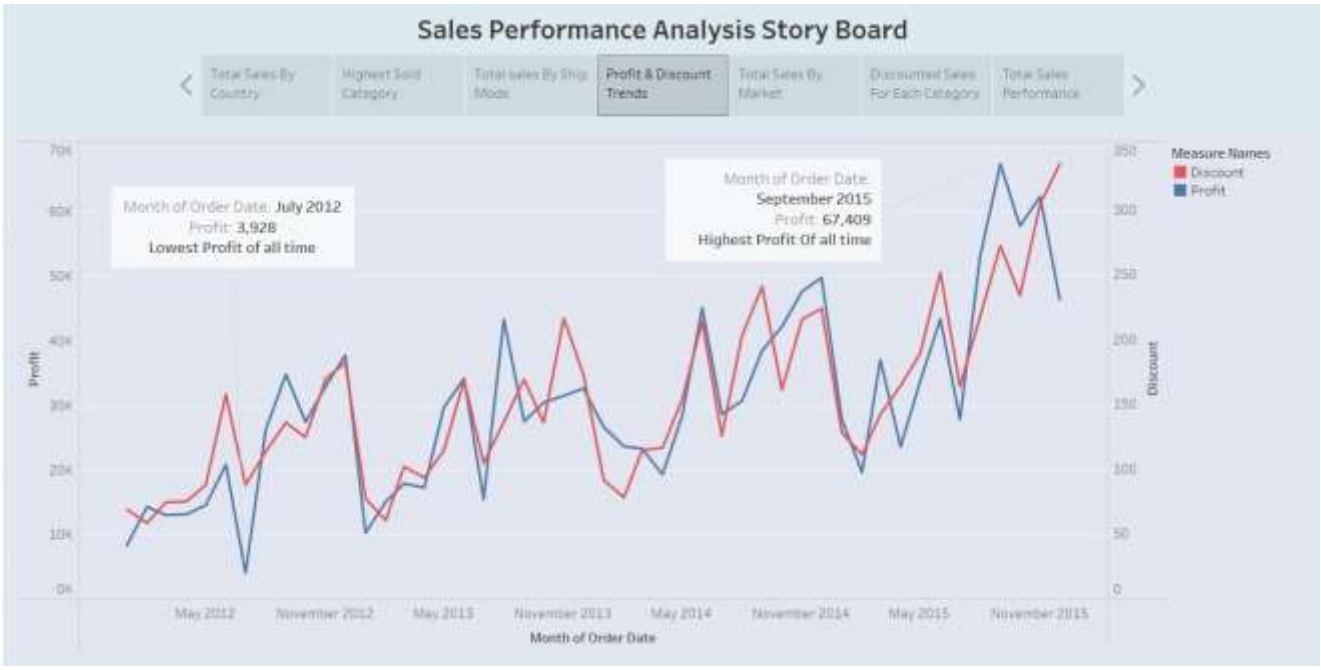
Sales Performance Analysis Story Board
Total Sales By Country
Highest Sold Category
Total sales By Ship Mode
Profit & Discount Trends
Total Sales By Market
Discounted Sales For Each Category
Total Sales Performance
Sub-Category
Category
Furniture
Office Supplies
Technology
Sales F
1600K
1400K
1200K
1000K
800K
600K
400K
200K
0K
Phones
Copiers
Chairs
Books
Storage
Applia
Machi
Tables
Access
Binders
Furnis
Art
Suppli
Paper
Envelo
Fasten
Labels
The Highest sold products are Phones from Technologies and Labels are the least sold from Office Supplies.

Sales Performance Analysis Story Board
Total Sales By Country
Highest Sold Category
Total sales By Ship Mode
Profit & Discount Trends
Total Sales By Market
Discounted Sales For Each Category
Total Sales Performance
Shipping Cost
$3.32,812
Ship Mode
First Class
Same Day
Second Class
Standard Class
Most of the sales by ship mode are from Standard class.
22.87%
8.61%
23.26%
45.26%


Sales Performance Analysis Story Board
Total Sales By Country
Highest Sold Category
Total sales By Ship Mode
Profit & Discount Trends
Total Sales By Market
Discounted Sales For Each Category
Total Sales Performance
Month of Order Date: July 2012
Profit: 3,928
Lowest Profit of all time
Month of Order Date: September 2015
Profit: 67,409
Highest Profit Of all time
Measure Names
Discount
Profit
Profit
Discount
70K
60K
50K
40K
30K
20K
10K
0K
350
300
250
200
150
100
50
0
May 2012
November 2012
May 2013
November 2013
May 2014
November 2014
May 2015
November 2015
Month of Order Date

Sales Performance Analysis Story Board
Total Sales By Country
Highest Sold Category
Total sales By Ship Mode
Profit & Discount Trends
Total Sales By Market
Discounted Sales For Each Category
Total Sales Performance
Asia Pacific
40,35,462
USCA
23,58,033
LATAM
21,59,583
Europe
32,81,445
Africa
7,81,499
Market
Africa
Asia Pacific
Europe
LATAM
USCA
Asia Pacific Market had sold most of the products and Africa Market had sold the least products.

Sales Performance Analysis Story Board
Total Sales By Country
Highest Sold Category
Total sales By Ship Mode
Profit & Discount Trends
Total Sales By Market
Discounted Sales For Each Category
Total Sales Performance
Sub-Category
Discounted Sales F...
900K
800K
700K
600K
500K
400K
300K
200K
100K
0K
Chairs
Copiers
Phones
Bookc...
Storage
Tables
Applia...
Machi...
Acces...
Binders
Furnis...
Art
Suppli...
Paper
Envelo...
Fasten...
Labels
Category
Furniture
Office Supplies
Technology
Date Range
01-01-2012
Discounted sales are highest for Chairs from Furniture and Lowest for Labels in Office supplies.

Sales Performance Analysis Story Board
Total Sales By Country
Highest Sold Category
Total sales By Ship Mode
Profit & Discount Trends
Total Sales By Market
Discounted Sales For Each Category
Total Sales Performance
Total Sales By Country
Sweden
Russia
82,721
Bosnia and Herzegovina
South Korea
Democratic Republic of the Congo
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Total Sales By Ship Mode
22.87%
45.26%
8.61%
23.26%
Total Sales By Market
Asia Pacific
40,35,462
USCA
LATAM
Europe
32,81,445
Date Range
Category
Furniture
Office Supplies
Market
Africa
Asia Pacific
Europe
LATAM
Ship Mode
First Class
Same Day
Second Class
Sales
19
2M
Measure Names
Discount
Highest Sold Category
Sub-Category
Sales
1.5M
1M
0.5M
0M
Copie
Book
Appli
Tables
Binde
Art
Paper
Fasta
Profit & Discount Trends
Month of Order Date
September 2015
Profit: 67,409
Highest Profit Of all time
Profit
60K
40K
20K
0K
Discount
300
200
100
0
2012
2013
2014
2015
2016
Month of Order Date
Discounted Sales
Sub-Category
0.5M
0M

KEY METRICS:

Primary KPI:

- **Total Sales**

Supporting KPIs:

1. **Sales by Country**: Highlighting the geographical distribution of sales.
2. **Sales by Category**: Identifying the top-performing product categories.
3. **Sales by Ship Mode**: Analysing the preferred shipping methods and their contribution to sales.
4. **Profit and Discount Trends**: Understanding profitability and discount strategies.
5. **Sales by Market**: Exploring sales performance across different markets.
6. **Discounted Sales for Each Category**: Analysing the impact of discounts on different categories.

Breakdown of Story Points:

1. **Total Sales by Country**
    - **Visualization:** World map highlighting sales per country.
    - **Insight:** "The highest sales are from the United States, and the least sales are from Laos."
2. **Highest Sold Category**
    - **Visualization:** Bar graph showing sales by sub-category.
    - **Insight:** "The highest sold products are Phones from Technology, and Labels are the least sold from Office Supplies."
3. **Total Sales by Ship Mode**
    - **Visualization:** Pie chart illustrating sales by ship mode.
    - **Insight:** "Most of the sales by ship mode are from Standard Class."
4. **Profit and Discount Trends**

    Profit Trends:

    - Lowest Profit: July 2012 with \$3,928.
    - Highest Profit: September 2015 with \$67,409.

    Discount Trends: The discount trend follows a somewhat similar pattern to profit trends but shows more fluctuations over time.

5. **Total Sales by Market**
    - **Asia Pacific:** The highest total sales $4,035,462.
    - **Europe:** The second highest total sales $3,281,445.
    - **USCA:** Total sales of $2,358,033.
    - **LATAM:** Total sales of $2,159,583.
    - **Africa:** The lowest total sales $781,499.

6. **Discounted Sales for Each Category**
    - **Highest Discounted Sales:** Chairs in the Furniture category.
    - **Lowest Discounted Sales:** Labels in the Office Supplies category.