

The high impact skills development program (AI – DS)

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SECTION 3

PHASE II

DATA SET : Online retail

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

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1. Executive Summary

This report analyzes the online retail 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 online retail'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:** online retail 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

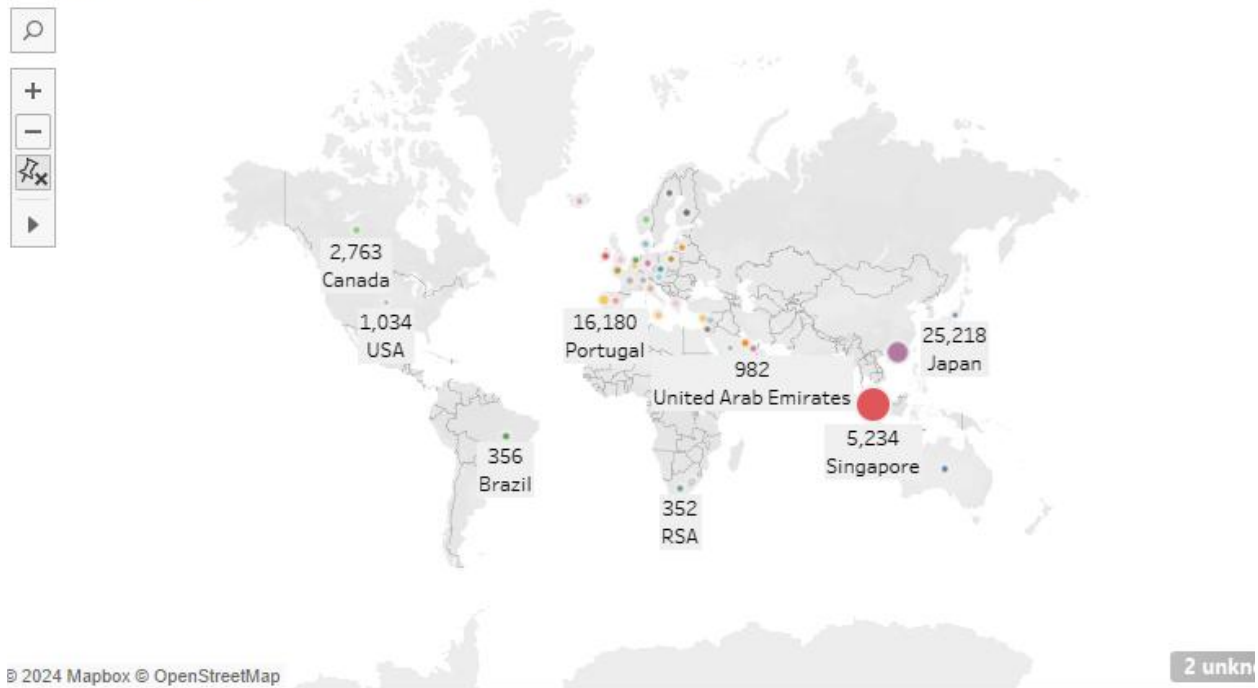
Initial exploration involved understanding the dataset's structure, key attributes, and identifying potential anomalies. Important fields such as regional sales, customer ratings, and product categories were extracted.

3.2 Map Visualization

The map displays sales distribution across regions. Insights include:

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

Average Unit price

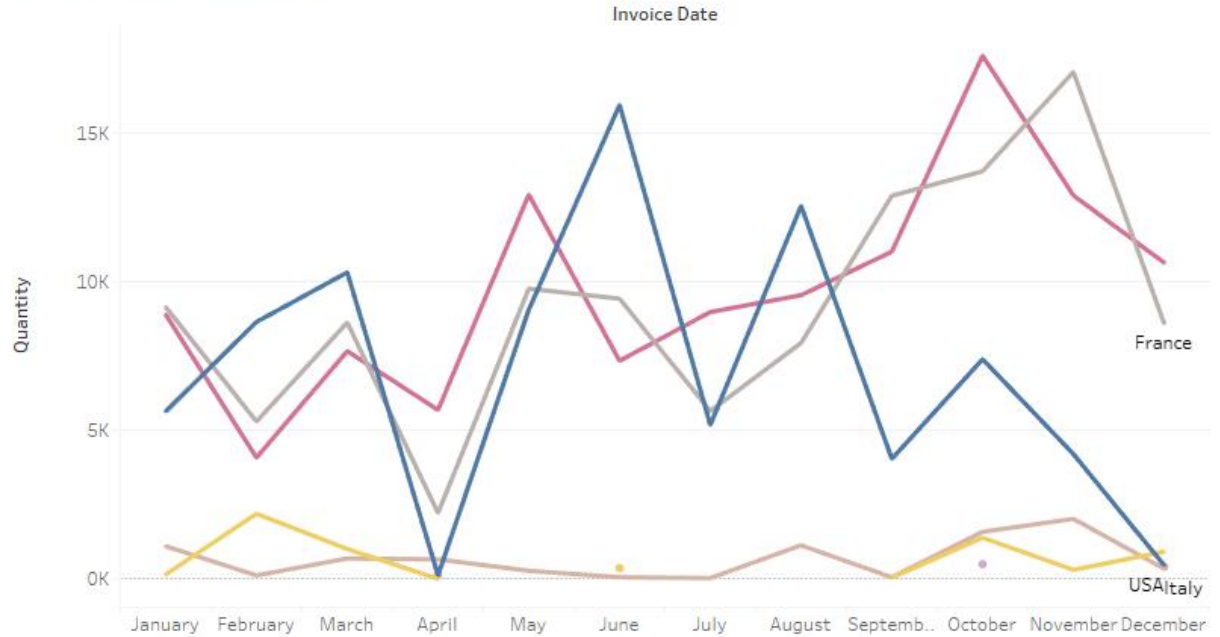


3.3 Line Chart

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

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

Invoice (Month-Wise)

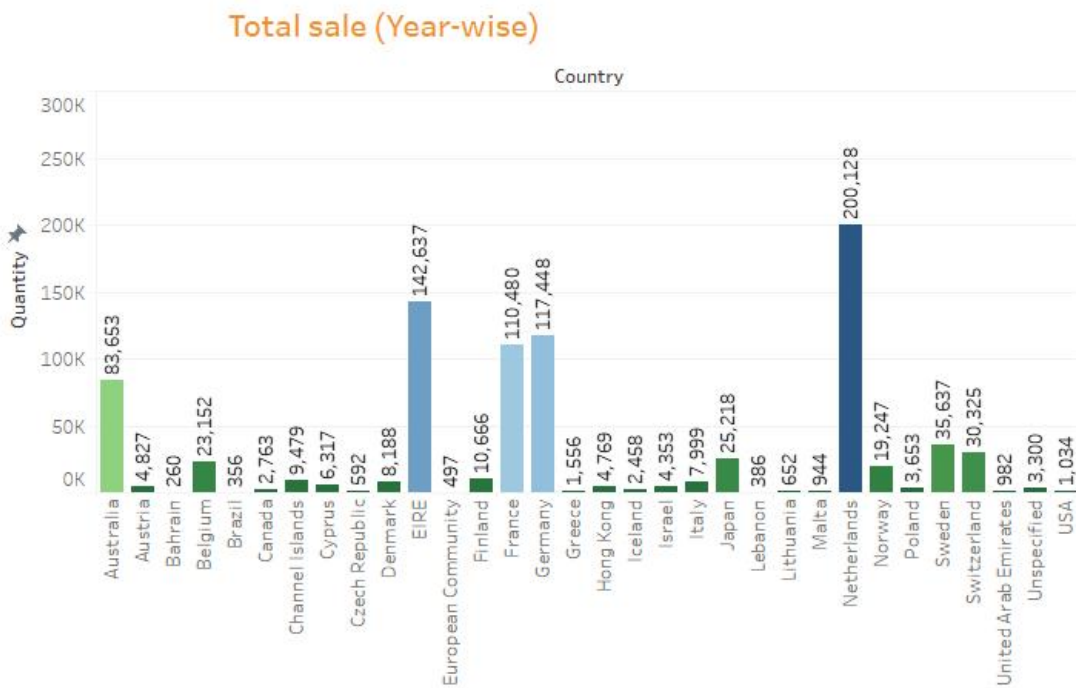


3.4 Bar Chart

The bar 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

T

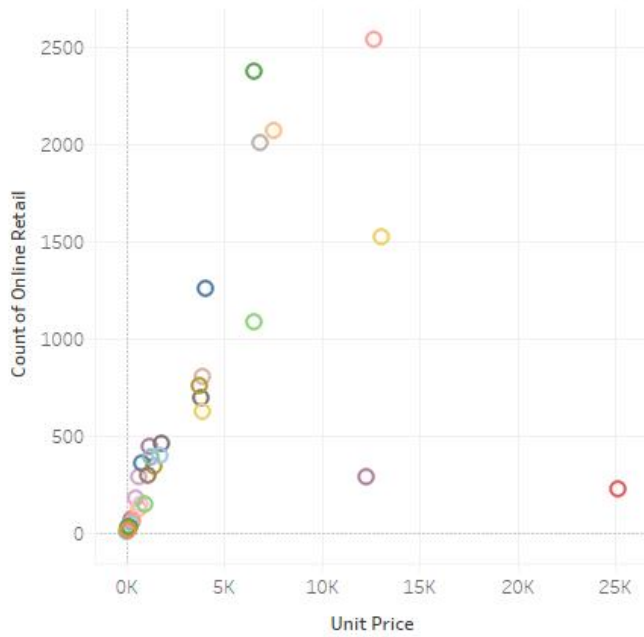


3.5 scatter Charts

Scatter charts show product distribution across categories:

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

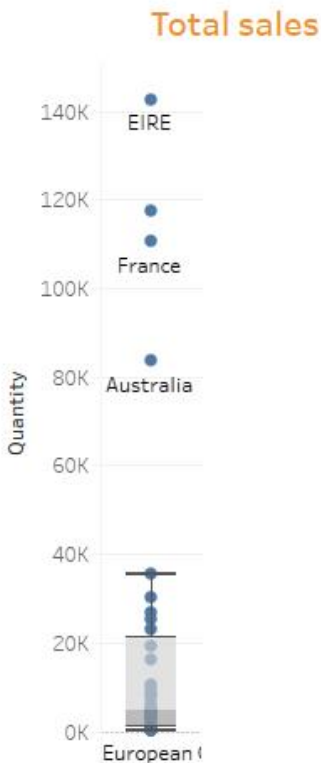
Online Retail



3.6 Box Chart

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

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



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

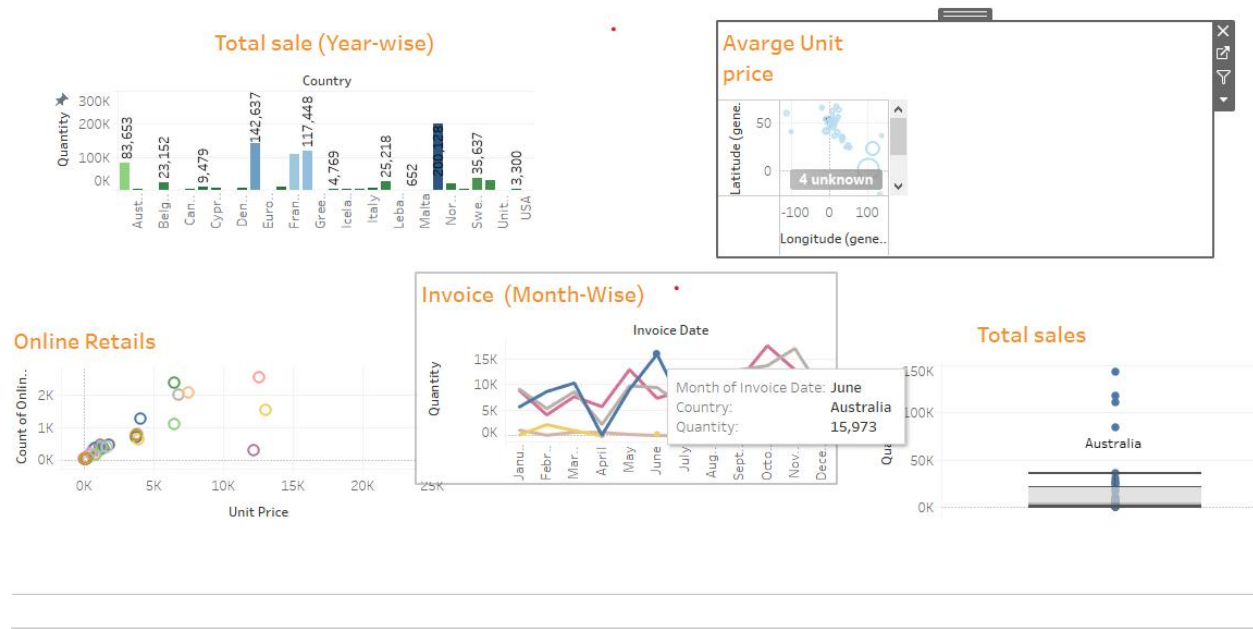
Text sheets summarize the key findings:

- [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.



5. Conclusion

The analysis of the online retail 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

8. Appendices