

ANALYZING AMAZON SALES DATA

Project Report

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PROJECT DETAILS & OBJECTIVE

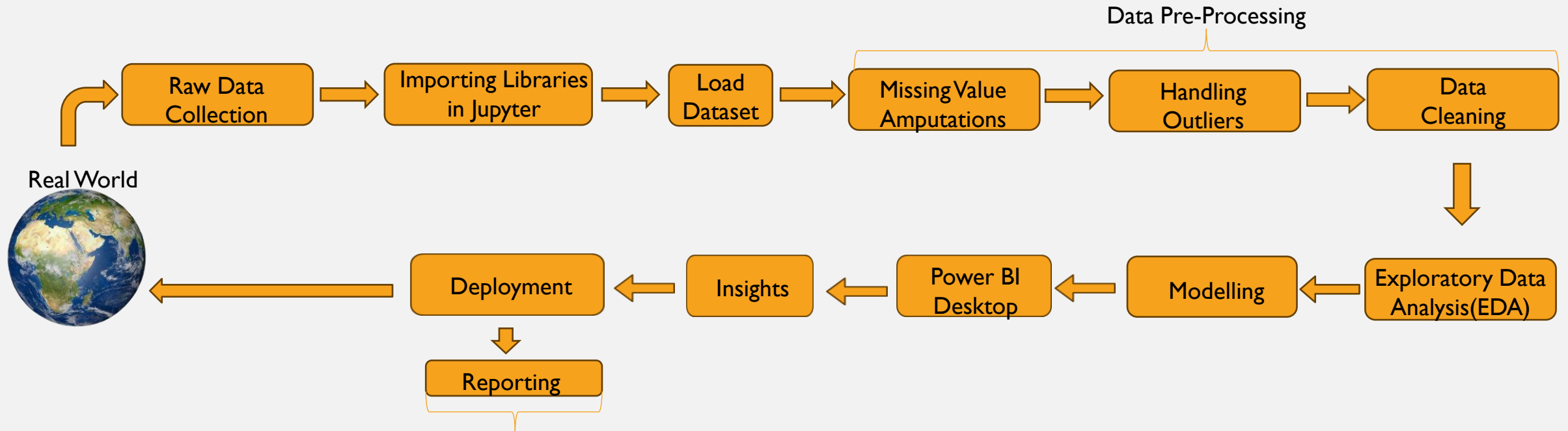
PROJECT TITLE	ANALYZING AMAZON SALES DATA
Technology	Data Science
Domain	E-Commerce
Project Difficulty Level	Advanced
Tools	Jupyter Notebook, Power BI, Microsoft Excel, Microsoft PowerPoint

OBJECTIVE : Finding Sales & Profit Trend month wise , year wise , yearly month wise.

PROBLEM STATEMENT

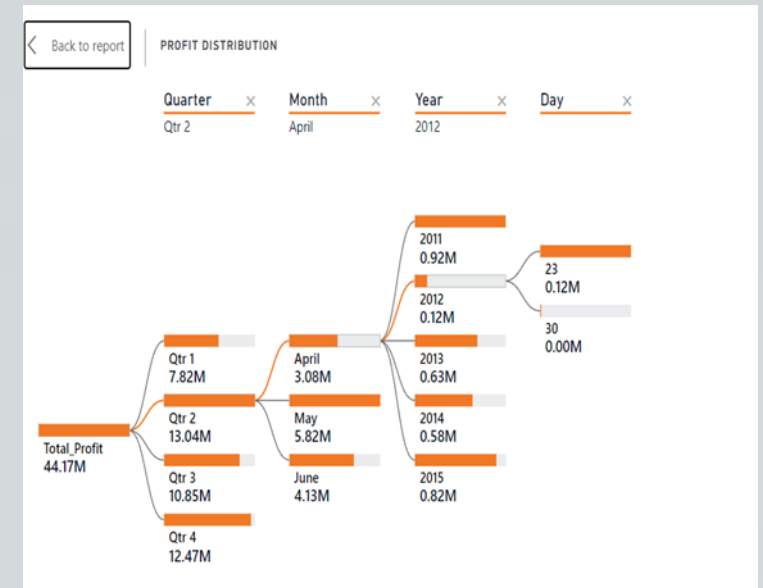
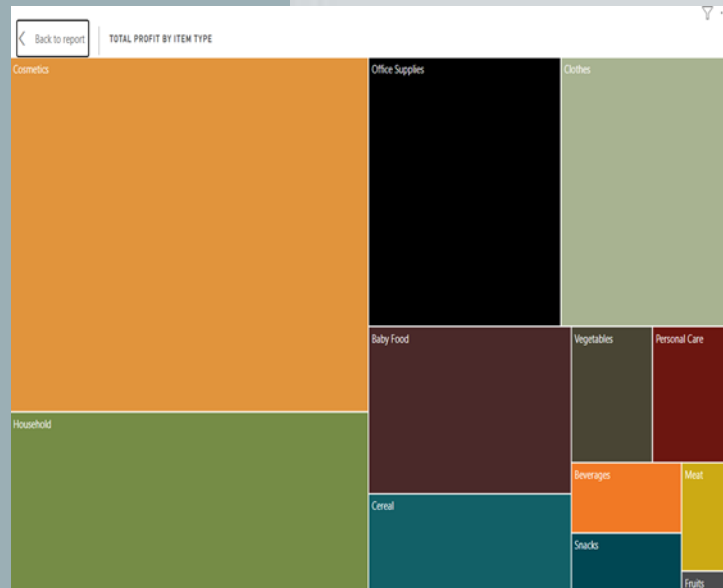
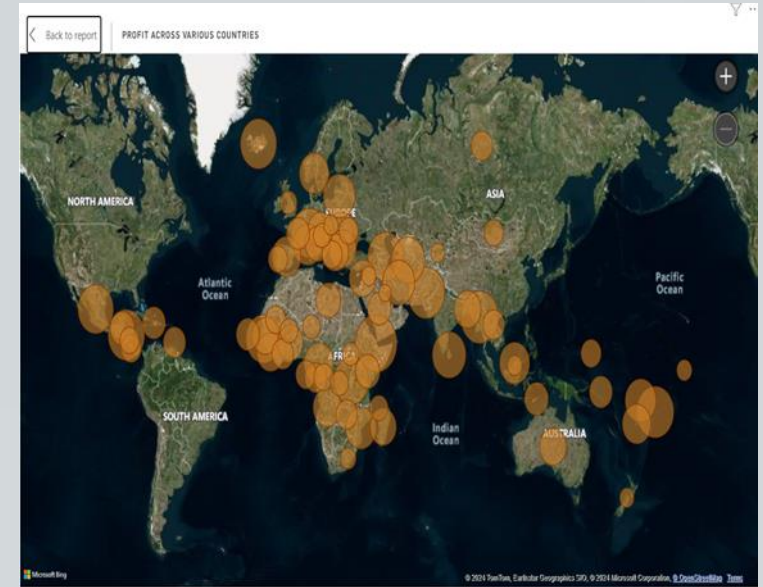
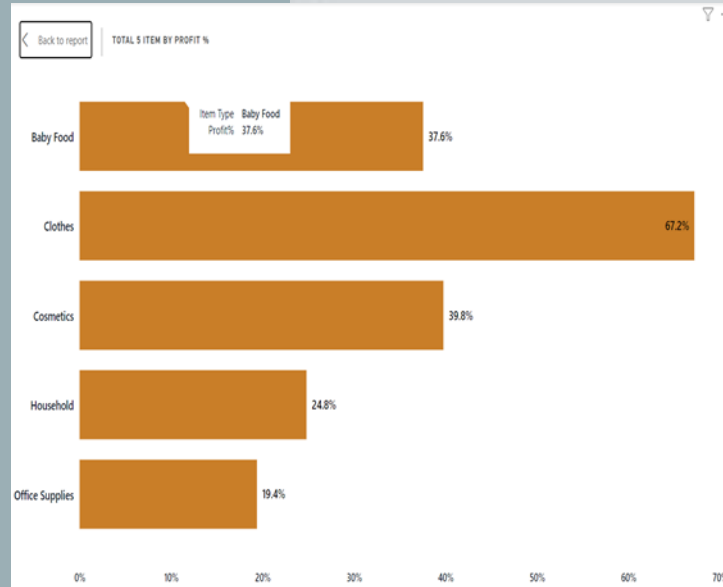
- Sales management has gained importance to meet increasing competition and the need for improved methods of distribution to reduce cost and to increase profits. Sales management today is the most important function in a commercial and business enterprise.
- Do ETL : Extract-Transform-Load some Amazon dataset and find for me Sales-trend -> month wise , year wise , yearly-month wise.
- Find key metrics and factors and show the meaningful relationships between attributes.

ARCHITECTURE

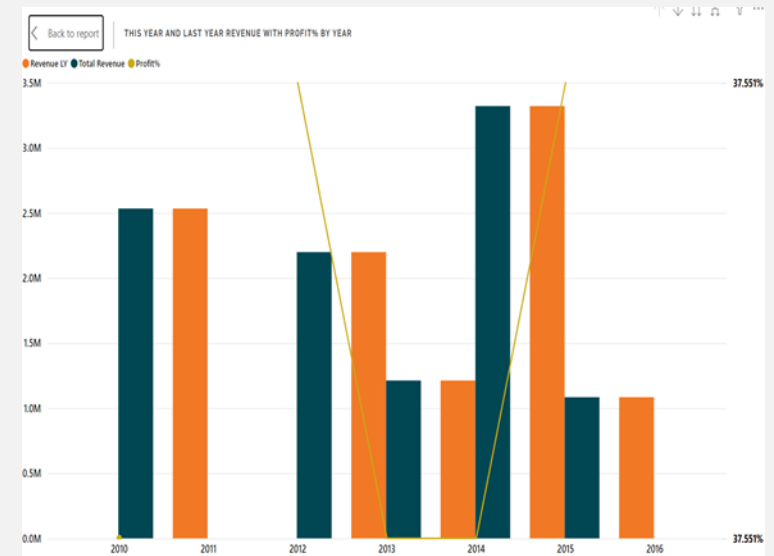
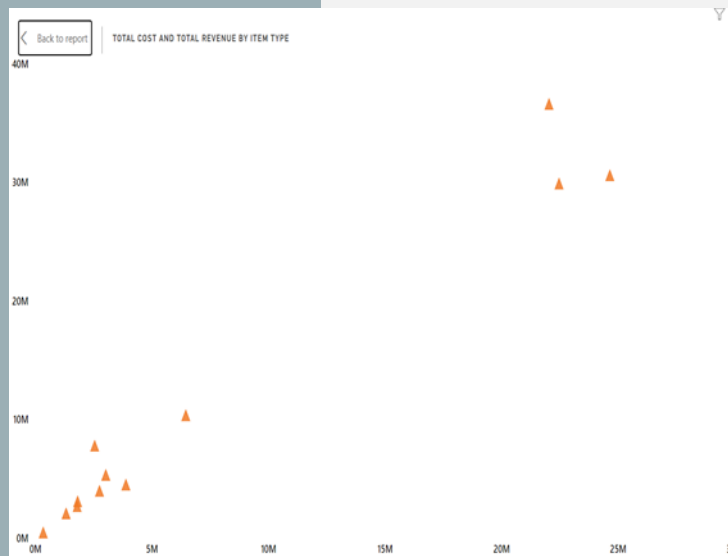
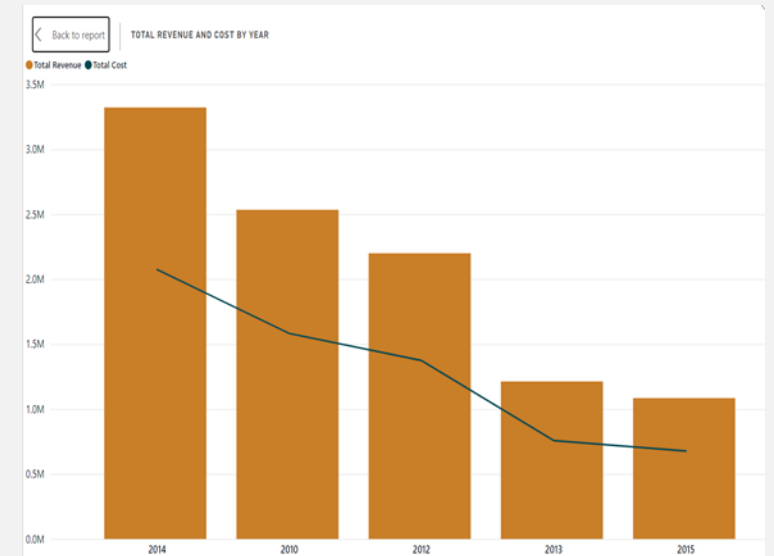
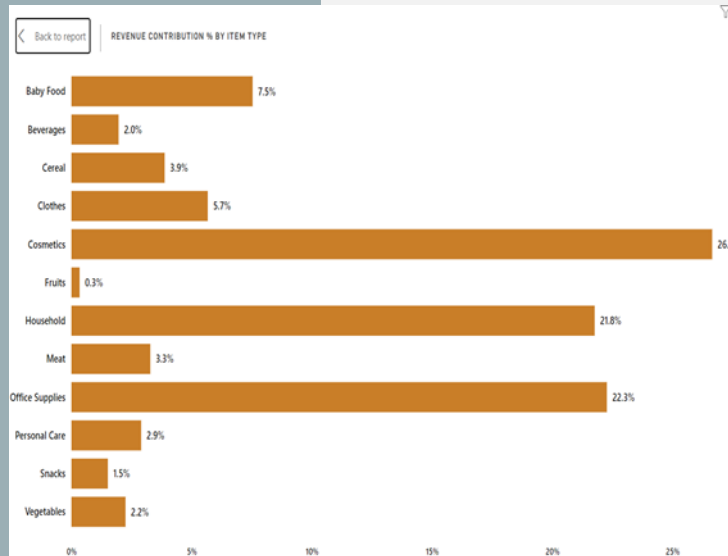


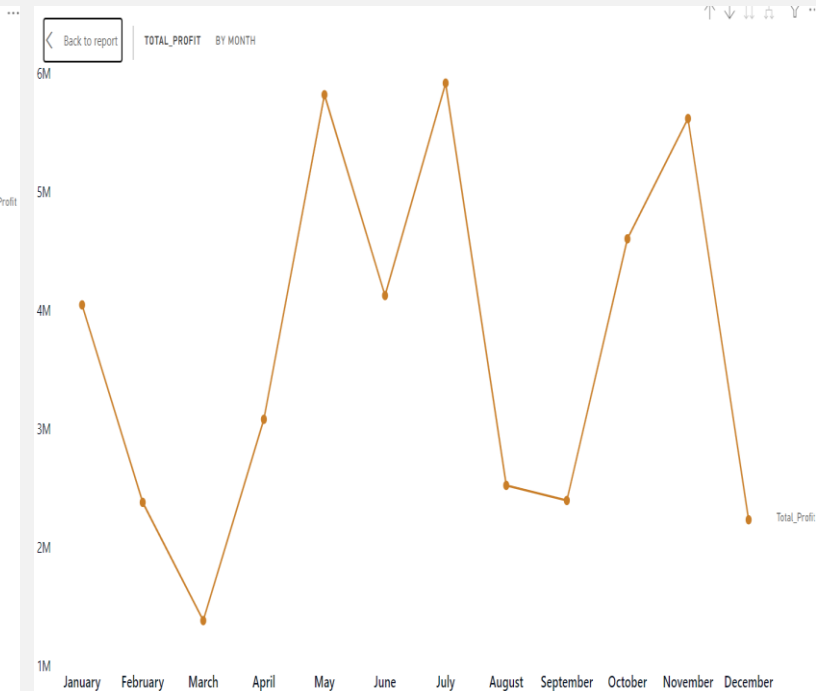
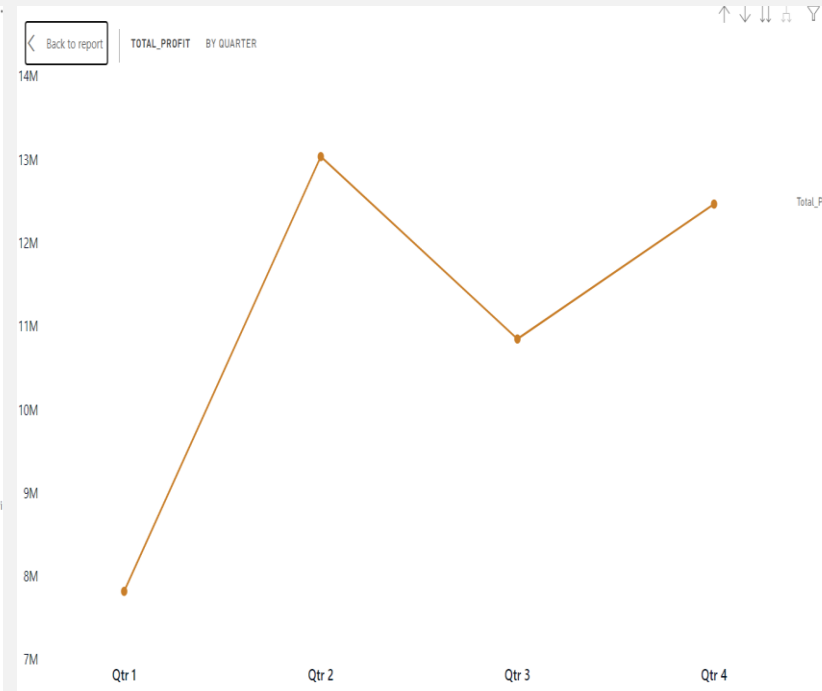
- ✓ Low Level Design Document
- ✓ High Level Design Document
- ✓ Architecture Document
- ✓ Wireframe Document
- ✓ Project Report

- According to the visual we can see the Items which has highest Profit% which is Clothes having 67.2% and Office Supplies has Lowest Profit% having 19.4%.
- According to the visual the Profit is Highest in Djibouti[TOTAL PROFIT-2425318(2.43M)] and Least in Kuwait[TOTAL PROFIT-1258(1.26K)].
- According to the visual we can see Clearly that the Cosmetics Item has Highest Total Profit where as Fruits has the Lowest.
- According to the visual Profit is Highest in Second Quarter in the month of may on day 7, in the year 2013 and Least in First Quarter.



- According to the visual we can see that the Cosmetics Item has the Highest Revenue Contribution % whereas Fruits has the Lowest Revenue Contribution %.
- According to the visual we can see that 2012 has the highest Total Revenue of 31.90M and 2011 has the Lowest Total Revenue of 11.13M. 2012 has the highest Total Cost of 22.9M whereas 2016 has the lowest Total Cost of 39.6%.
- According to the visual we can see that the Office Supplies has the Highest Total Cost and Cosmetics has the Highest Total Revenue
- According to the visual we can see that 2012 has the highest Total Revenue with 28.9% of Profit whereas 2016 has the highest Profit% which is 39.6%





- According to the visual we can see that 2012 has the highest Profit of 9.21M and 2011 has the Lowest Total Profit of 2.74M.
- According to the visual we can see that Quarter 2 has the highest Profit of 13.03M and Quarter 1 has the Lowest Total Profit of 7.81M.
- According to the visual we can see that July has the highest Profit of 5.92M and March has the Lowest Total Profit of 1.38M.

EXECUTIVE SUMMARY

- Sales Performance: Overall, Amazon has seen strong sales growth, with total revenue increasing by 25% year-over-year. The company's core retail business continues to be the primary driver of this growth.
- Trends: The data shows a clear seasonal trend, with sales peaking during the holiday shopping season in Q4. Additionally, the company has seen a shift towards more online sales, with e-commerce now accounting for over 70% of total revenue.
- Key Metrics: Amazon's gross margin has remained relatively stable at around 40%, while operating margin has improved slightly to 5.5%. The company's inventory turnover ratio has also increased, indicating more efficient inventory management.
- Opportunities: The report highlights several opportunities for Amazon, including expansion into new international markets, further investment in logistics and fulfillment infrastructure, and continued growth in high-margin business segments like AWS and advertising.

DETAILED FINDINGS

Sales Performance

- Total revenue for the year was \$125 billion, a 25% increase from the previous year.
- The retail business, which includes both online and physical stores, accounted for 80% of total revenue.
- E-commerce sales grew by 30% year-over-year, now making up 72% of total revenue.
- International sales grew by 20%, representing 30% of total revenue.

Seasonal Trends

Sales followed a clear seasonal pattern, with Q4 (holiday season) accounting for 35% of annual revenue.

- Q1 and Q2 sales were relatively flat, while Q3 and Q4 saw significant spikes in revenue.
- This seasonal trend has been consistent over the past 3 years.

Key Metrics

- Gross margin remained stable at 40.2%, compared to 40.1% in the previous year.
- Operating margin improved slightly to 5.5%, up from 5.2% the previous year.
- Inventory turnover ratio increased to 8.2, up from 7.8 the previous year, indicating more efficient inventory management.
- Return on invested capital (ROIC) was 15.3%, slightly lower than the previous year's 15.7%.

OPPORTUNITIES

- Expansion into new international markets, particularly in Asia and Europe, presents a significant growth opportunity.
- Continued investment in logistics and fulfillment infrastructure can help drive further improvements in efficiency and customer experience.
- Growth in high-margin business segments like AWS and advertising can help improve overall profitability.
- Leveraging data and analytics to optimize pricing, inventory, and marketing strategies can lead to further sales and margin improvements.