Amazon Sales Data Analysis

Detailed Project Report

PROJECT DETAIL

- **Project title: Amazon Sales Data Analysis**
- **Technology: Business Intelligence**
- **Domain name: E-commerce**
- **Difficulties level: Advance**
- **Tools: PowerBi, Ms Excel, Ms 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.

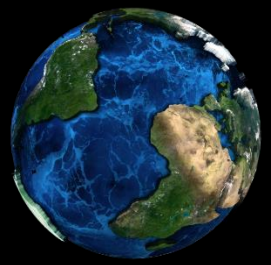
- Do ETL : (Extract-Transform-Load) some Amazon dataset and find Sales-trend -> monthwise , year wise , yearly-month wise

- Find key metrics and factors and show the meaningful relationships between attributes.

ARCHITECTURE

amazon

Real World



Raw Data Collection → Load Dataset → Data Pre-Processing (Missing Value Imputations → Handling Outliers → Data Cleaning) → Exploratory Data Analysis (EDA) → Modelling → Power BI Desktop → Insights → Deployment → Real World

Deployment → Reporting

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

DATASET INFORMATION

This is a Sales related dataset that contains Information like Sales Amount, Cost Amount, Sales Prices, List Prices, Sales Margins, Sales Quantities, etc.

Dashboard Insights

amazon

SALES ANALYSIS

Select Year & Quarter

- ☐ 2017
- ☐ 2018
- ☐ 2019

$7,53,65,752.0
Profits

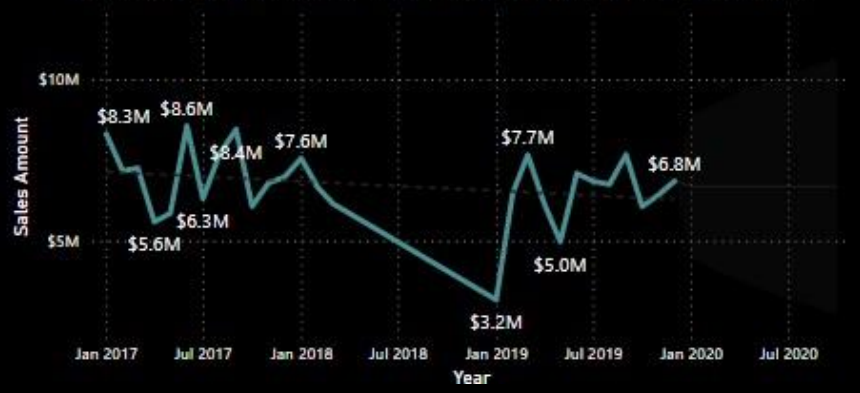
28,56,611
Quantity

18,14,56,833.11
Total Sales

Item	Quantity	Cost	Sales Amount	Profits	Profits%
Better Large Canned Shrimp	5,90,343	$99,94,346.21	$1,54,54,172.47	54,59,826.26	54.63%
High Top Dried Mushrooms	3,76,904	$87,08,447.43	$1,33,67,239.65	46,58,792.22	53.50%
Big Time Frozen Cheese Pizza	27,420	$23,00,398.18	$51,27,171.17	28,26,772.99	122.88%
Fast Mini Donuts	27,300	$23,46,173.42	$50,09,499.08	26,63,325.66	113.52%
Discover Manicotti	7,228	$25,19,471.64	$49,01,139.48	23,81,667.84	94.53%
Ebony Squash	10,553	$30,44,481.59	$53,80,727.75	23,36,246.16	76.74%
Better Fancy Canned Sardines	17,581	$28,37,568.42	$49,65,960.97	21,28,392.55	75.01%
Landslide White Sugar	16,198	$22,02,535.16	$42,82,290.62	20,79,755.46	94.43%
Tell Tale Red Delcious Apples	31,120	$21,17,287.92	$40,95,211.34	19,77,923.42	93.42%
Total	**28,56,611**	**$10,60,91,081.12**	**$18,14,56,833.11**	**7,53,65,751.99**	**71.04%**

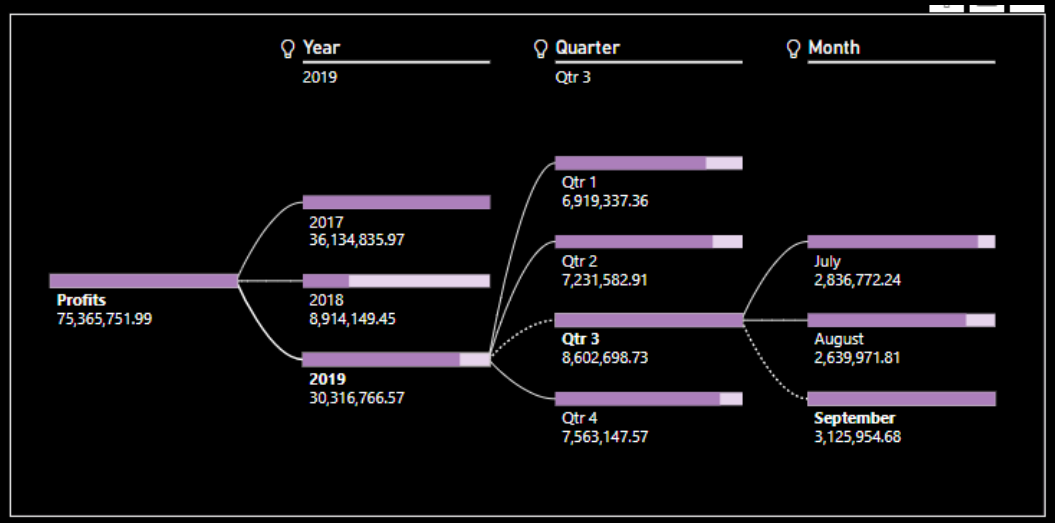
Profits by Year and Quarter

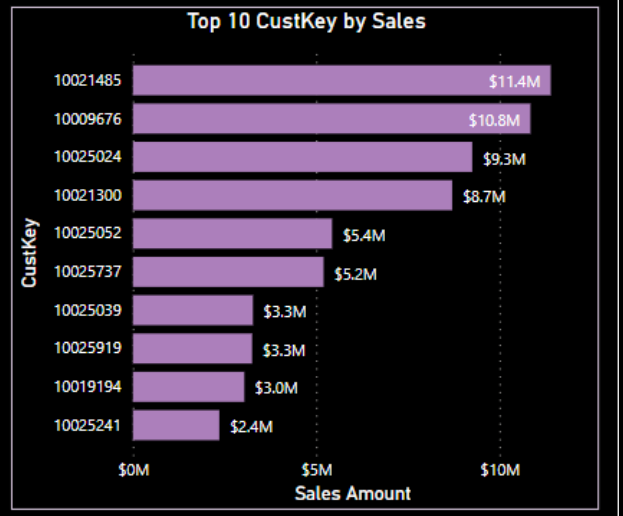
Sales Amount, %GT Sales Amount and Profits by Year, Quarter and Month

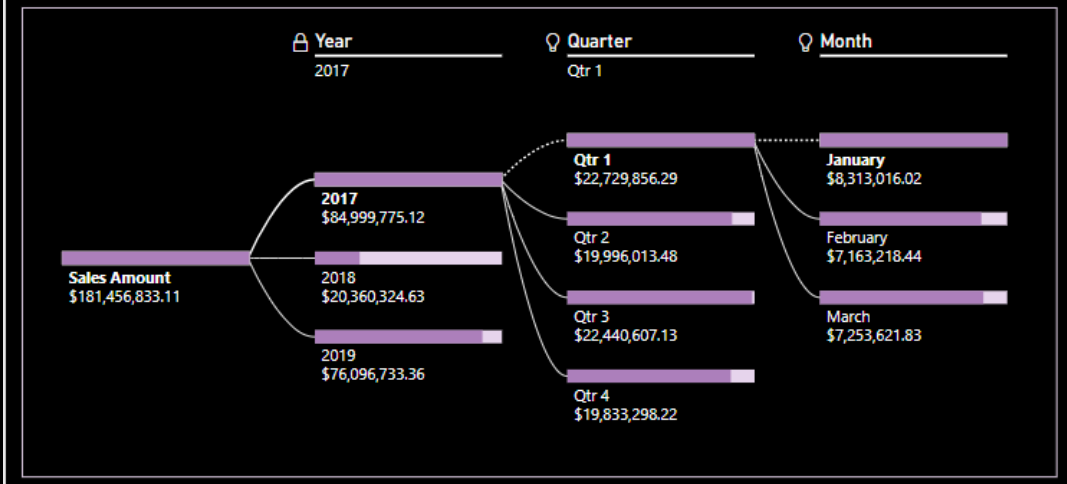


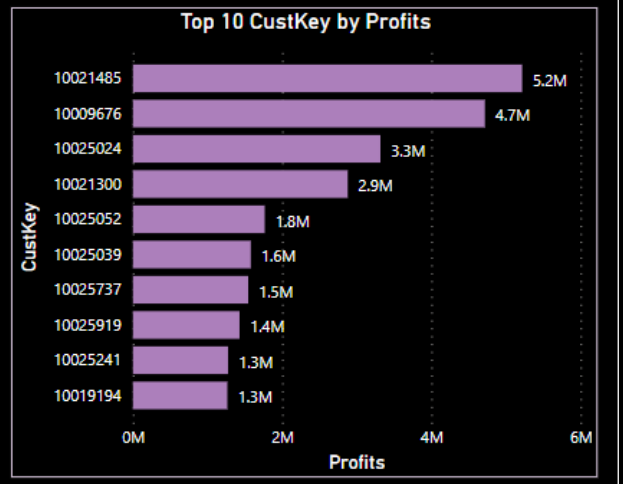
- Better Large Canned Shrimp had the highest Sales at $15,454,172.47 and Kiwi Lox had the lowest Sales at $204.71.
- For cumulative of all years, Amazon made a Sales of $18,14,56,833.11 by selling an overall quantity of 28,56,611 which in turn resulted in $7,53,65,752.0 profit.
- Also, there is a steep decline in sales from annuary 2018 to January 2019 which went from $7,554,685.37 to $3,170,346.02.

Profit, Sales and Customer Analysis



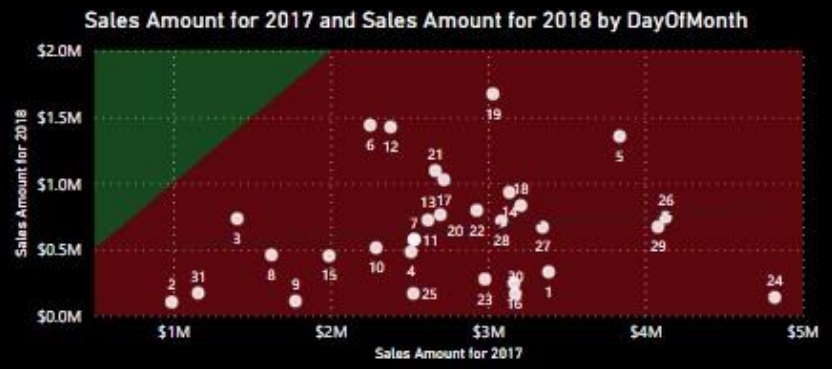






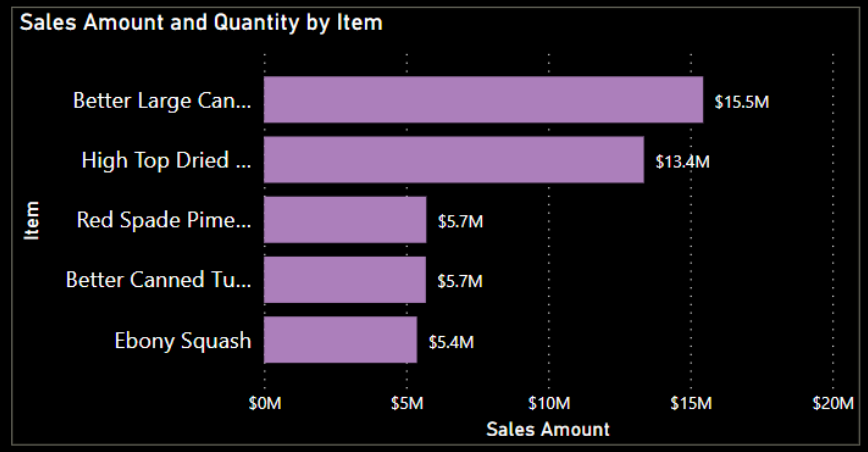
- Above Decomposition visual analyses shows how much Sales & Profits were made from 2017 to 2019.
- Comparing all 3 Years, 2017 was the year in which highest Sales & Profits were made, which was $8,49,99,775.12 and $3,61,34,835.97, followed by year 2019 and then 2018 having least Sales and Profit.
- Sales & Profits were very balanced in all 4 Quarters, but it was highest in Q3($8,602,698.73).

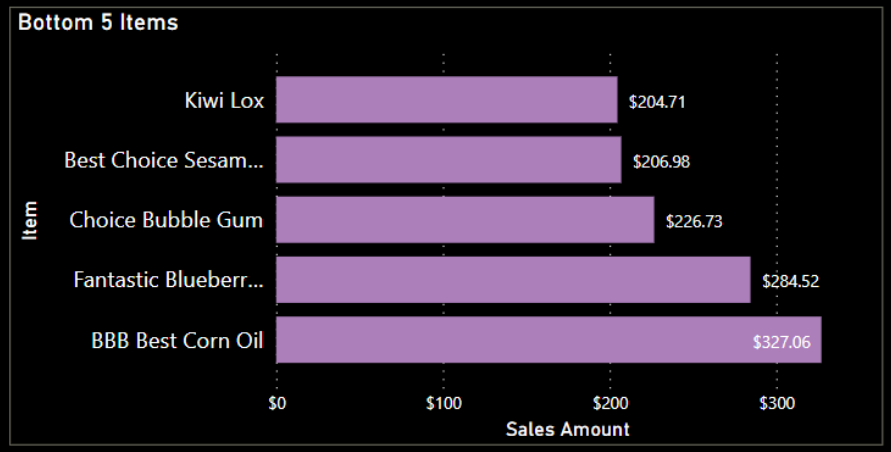
Sales Insights

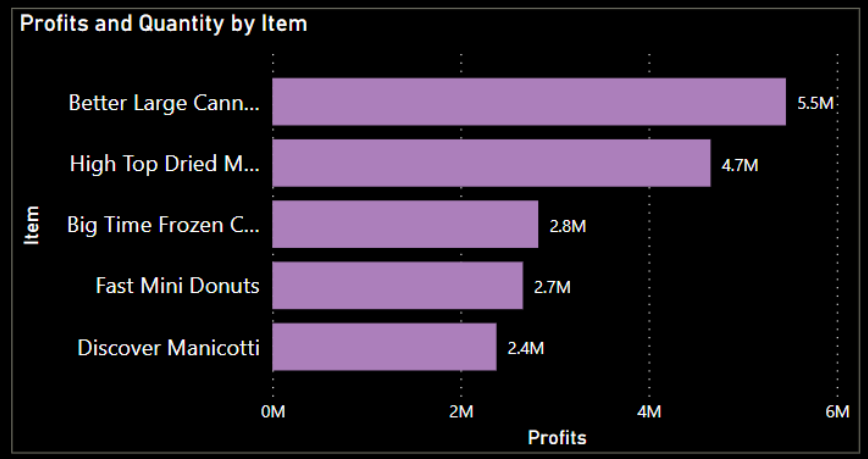


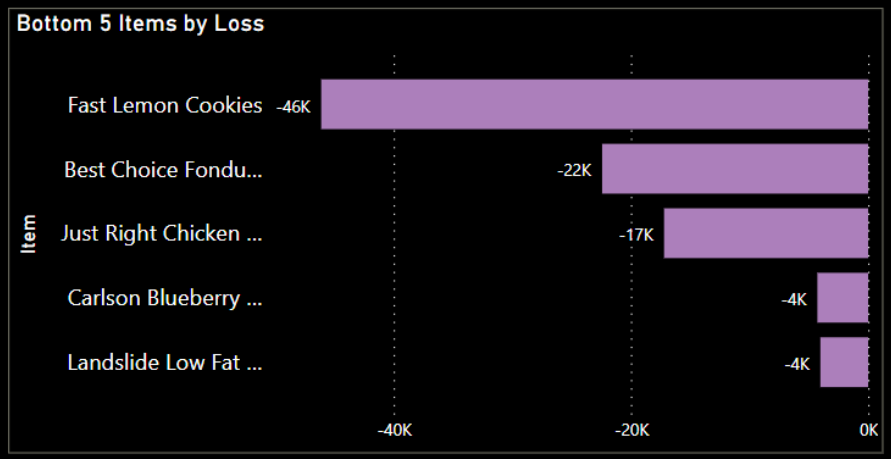
- In 2017 Revenue was $8,49,99,775.12 and Profit was $3,61,34,835.97 which was 72.68% of Cost Amt. and it was 47.95% of Grand Total Profit. In 2018 Revenue was $20,360,324.63 and Profit was $8,914,149.95 which was 77.88% of Cost Amt. and it was 11.82% of Grand Total Profit. In 2019 Revenue was $76,115,603.9 and Profit was $30,322,184.85 which was 66.22% of Cost Amt. and it was 40.21% of Grand Total Profit.
- If we Compare Sales for 2017 and Sales for 2018 we found that on 24, 26 and 29 there was largest decline among Days. The relative contributions made by 24, 19, 6 changed the most.
- If we Compare Sales for 2018 and Sales for 2019 we found that on September, June and December there was largest increase among the months. The relative contributions made by Jan, Feb, Mar changed the most.

Item-wise Distribution

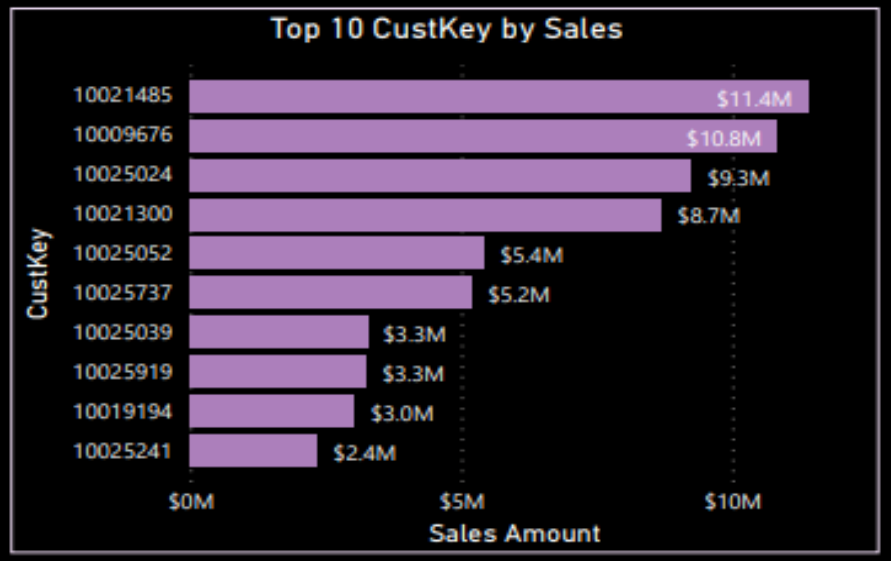




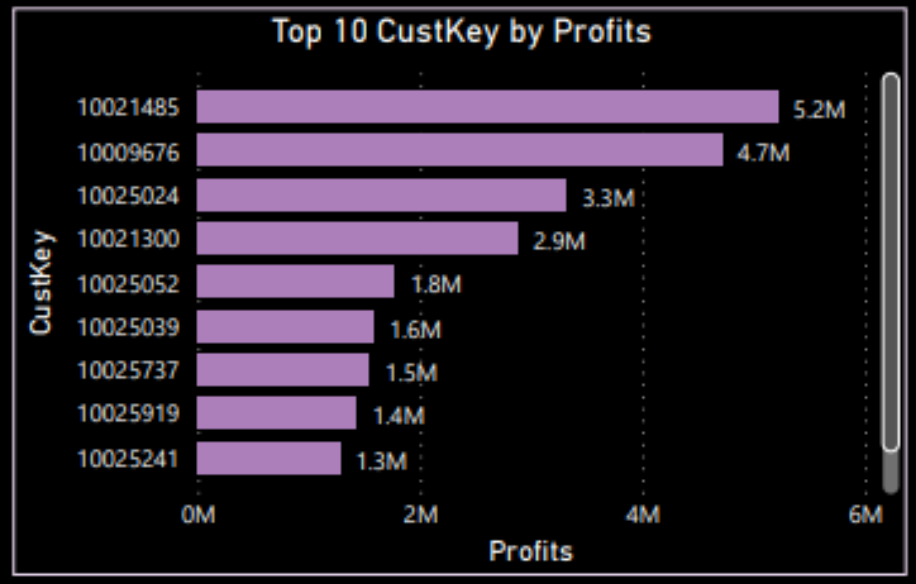




- Better Large Canned Shrimp had the highest Sales with $15,454,172.47, and was higher than Ebony Squash, which had the 5th Highest Sales at $5,380,727.75. Across all 5 Item, Sales ranged from $5,380,727.75 to $15,454,172.47.
- At $5,459,826.26, Better Large Canned Shrimp had the highest Profits and was 129.24% higher than Discover Manicotti, which had the 5th highest Profits at $2,381,667.84. Across all 5 Item, Profits ranged from $2,381,667.84 to $5,459,826.26.
- At $327.06, BBB Best Corn Oil had the 5th lowest Sales and was 59.77% higher than Kiwi Lox, which had the lowest Sales at $204.71. Across all 5 Item, Sales ranged from $204.71 to $327.06.
- At $4,026.61, Landslide Low Fat Apple Butter had the 5th Highest Loss and was 91.27% higher than Fast Lemon Cookies, which had the Highest Loss at $46,106.59. Across all 5 Item, Loss ranged from ($46,106.59) to ($4,026.61).



- At $1,13,97,206.36, Customer-10021485 had generated highest Sales and was 383.63% higher than Customer-10025241, which had the 10th highest Sales at$23,56,595.66.
- Customer-10021485 accounted for 18.16% of Sales. Across all 10 CustKey, Sales ranged from
- $23,56,595.66 to $1,13,97,206.36.



- At $52,15,559.07, 10021485 had generated highest Profits and was 312.11% higher than 10019194, which had the 5th highest Profits at $12,65,561.04.
- Across all 10 CustKey, Profits ranged from $1265561.04 to $5215559.07.

Sales & Profit

Sales trended down, resulting in a 10.42% decrease between January 2017 and January 2018. Sales started trending down in January 2017, falling by 10.42% ($23,69,531.66) in 4 quarters. Sales dropped from $2,27,29,856.29 to $2,03,60,324.63 during its steepest decline between January 2017 and January 2018. Sales trended down, resulting in a 5.06% decrease between January 2018 and October 2019. Sales started trending up on April 2019, rising by 6.22% ($11,31,718.23) in 2 quarters. Sales jumped from $1,81,99,115.14 to $1,93,30,833.37 during its steepest incline between April 2019 and October 2019.

Profits trended down, resulting in a 6.82% decrease between January 2017 and January 2018. Profits started trending down in January 2017, falling by 6.82% ($6,52,731.37) in 4 quarters. Profits dropped from $95,66,880.82 to $89,14,149.45 during their steepest decline between January 2017 and January 2018. Profits trended down, resulting in a 15.16% decrease between January 2018 and October 2019.

At $87,73,249.43, Better Large Canned Shrimp had the highest Sales and was 42,85,596.56% higher than Kiwi Lox, which had the lowest Sales at $204.71. Sales and total Profits are negatively correlated with each other. Better Large Canned Shrimp accounted for 9.10% of Sales. Sales and Profits diverged the most when the Item was Better Large Canned Shrimp when Sales were $57,32,729.64 higher than Profits.

QUESTIONS AND ANSWERS

Q1) What's the source of data?

- The Dataset was taken from iNeuron's Provided Project Description Document.

Q2) What was the type of data?

- The data was a combination of numerical and Categorical values.

Q 3) What was the complete flow you followed in this Project?

- Understanding architecture of data analystics and as per architecture given above at slide 5, I have followed for this project

Q4) What techniques were you using for data?

- Removing unwanted attributes.
- Visualizing relation of independent variables with each other and output variables.
- Checking and changing distribution of continuous values.
- Removing outliers
- Cleaning data and imputing if null values are present.
- Transforming data to yield the desired result.

Thank you