AMAZON SALES DATA ANALYSIS

Detailed Project Report

By:- Gautam Mahto

PROJECT DETAIL

Project Title	Amazon Sales Data Analysis
Technology	Business intelligence
Domain name	E-Commerce
Project Difficulties Level	Advanced
Tools	Jupyter notebook, Power Bi, Ms Excel, Ms PowerPoint, Ms Word.

OBJECTIVE

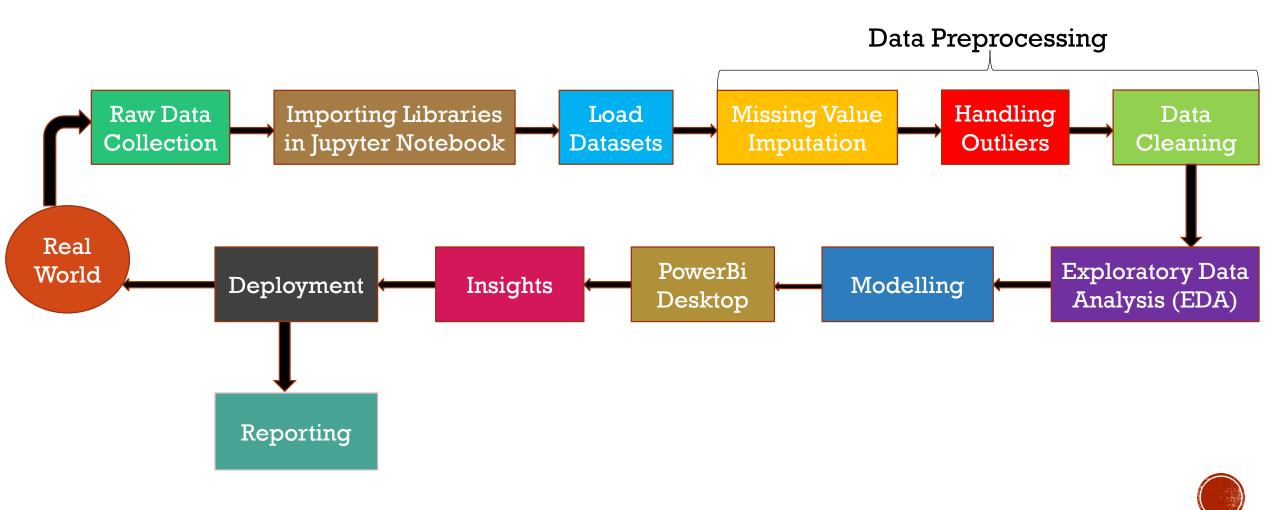- Finding Sales & Profit Trend month wise , year wise , yearly month wise

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

Data Preprocessing

Raw Data Collection → Importing Libraries in Jupyter Notebook → Load Datasets → Missing Value Imputation → Handling Outliers → Data Cleaning

Real World

Deployment ← Insights ← PowerBi Desktop ← Modelling ← Exploratory Data Analysis (EDA)
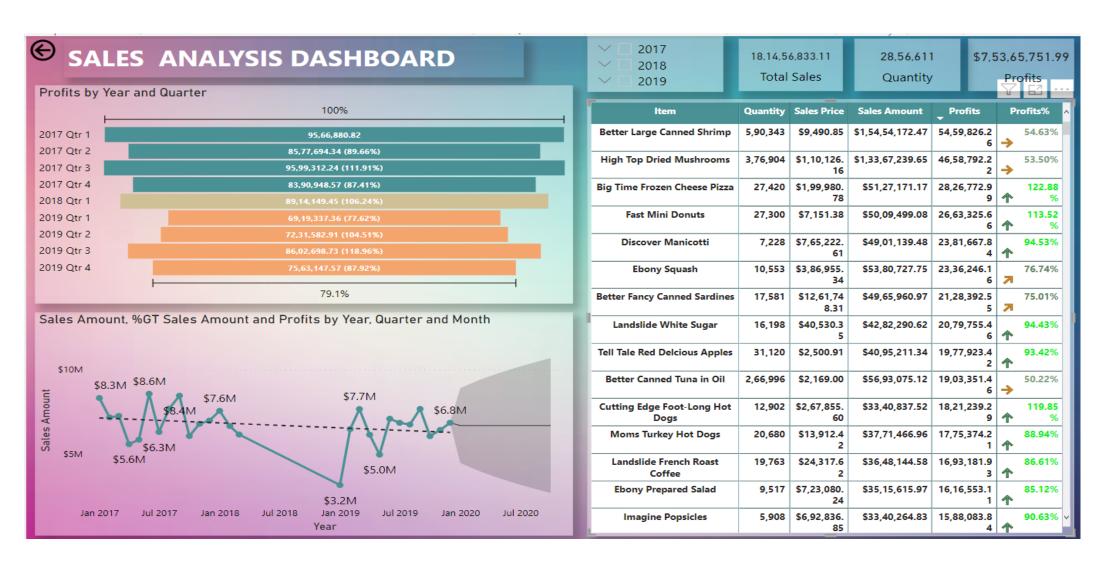
Reporting

DATASET INFORMATION

- This is a Sales related dataset that contains Information like Sales Amt., Cost Amt., Sales Prices, List Prices, Sales Margins, Sales Quantities, etc
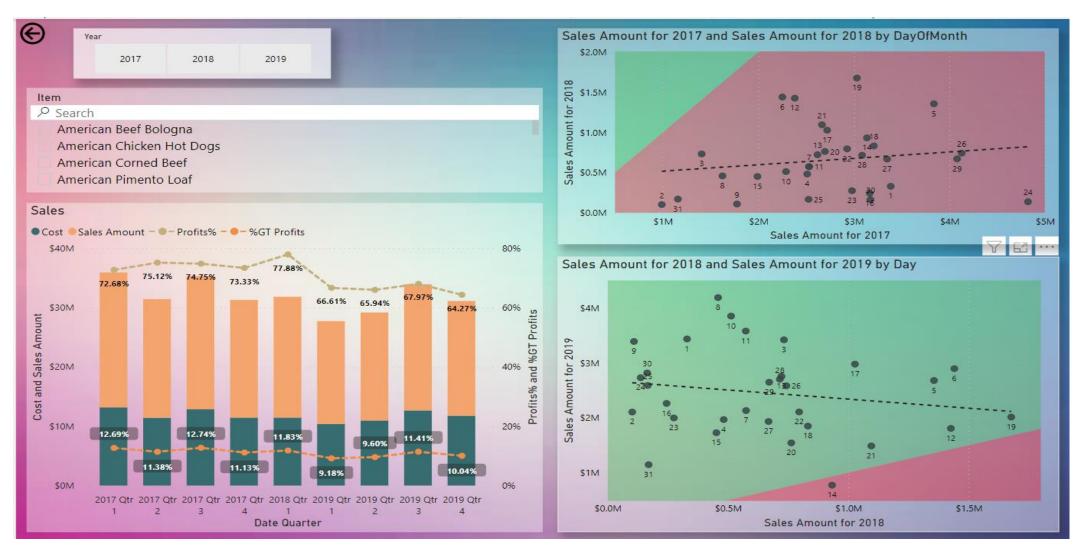
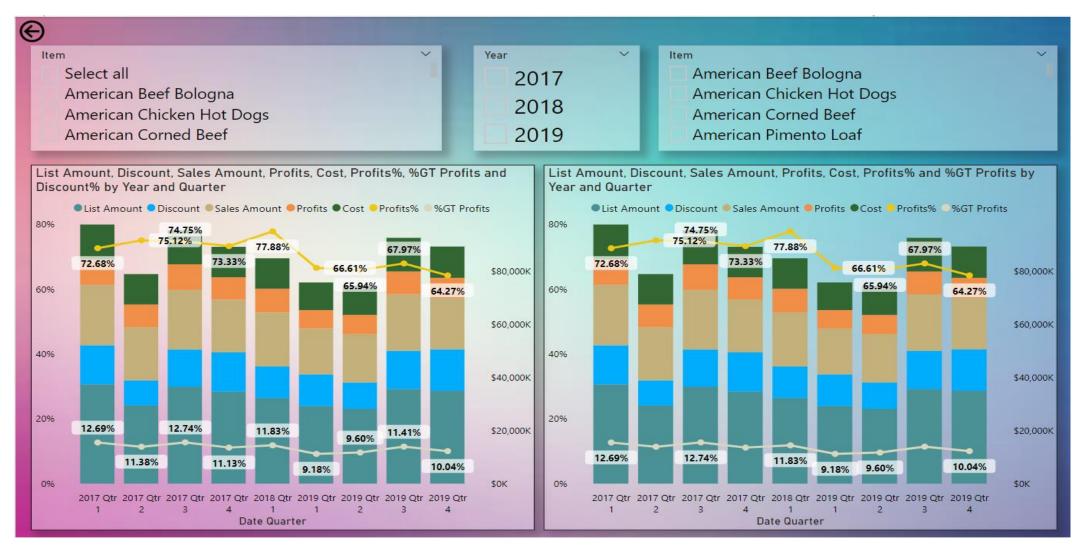# SALES & PROFIT INFO

SALES INSIGHTS
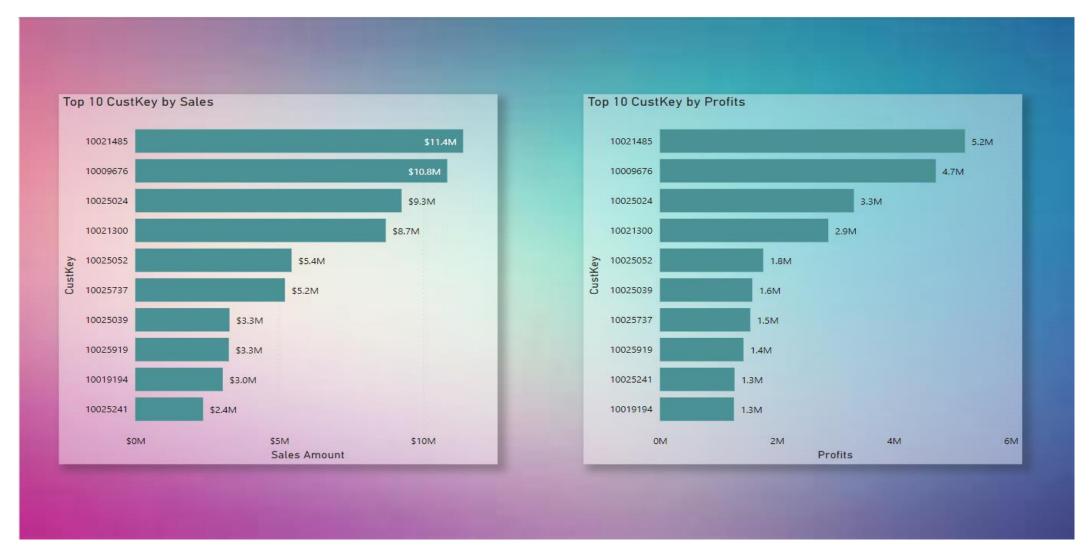
TOP & BOTTOM PRODUCTS
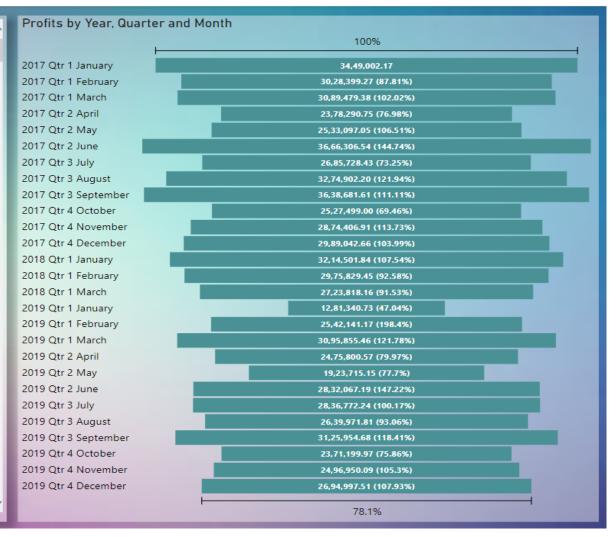
ITEM COMPARISION

DETAILED PROFIT ANALYSIS

TOP BY CUSTKEY

SALES TREND

Invoice Date	First Item	Quantity	Sales Amt	Profits	Profits%
16-06-2017	Atomic Bubble Gum	23,710	$6,71,855.84	2,42,262.42 ↑	56.39%
28-06-2019	Atomic Bubble Gum	23,708	$6,44,783.05	2,15,265.77 ↑	50.12%
14-07-2017	Atomic Spicy Mints	17,822	$6,03,322.61	1,98,130.65 ↑	48.90%
06-01-2018	Atomic Spicy Mints	17,820	$6,20,933.57	2,15,517.88 ↑	53.16%
14-01-2017	Atomic Spicy Mints	17,819	$6,02,653.18	1,97,461.22 ↑	48.73%
14-04-2017	Atomic Spicy Mints	17,819	$6,02,653.18	1,97,461.22 ↑	48.73%
25-01-2019	Atomic Spicy Mints	17,819	$5,78,547.05	1,73,355.09 ↑	42.78%
26-04-2019	Atomic Spicy Mints	17,819	$5,78,547.05	1,73,355.09 ↑	42.78%
26-07-2019	Atomic Spicy Mints	17,819	$5,78,547.05	1,73,355.09 ↑	42.78%
18-06-2017	American Potato Salad	17,649	$10,75,725.71	4,77,173.34 ↑	79.72%
30-06-2019	American Potato Salad	17,511	$10,11,561.10	4,13,530.29 ↑	69.15%
12-05-2017	Atomic Bubble Gum	17,090	$6,57,549.08	2,35,780.69 ↑	55.90%
24-05-2019	Atomic Bubble Gum	17,066	$6,30,472.63	2,09,183.37 ↑	49.65%
12-02-2018	American Chicken Hot Dogs	16,449	$8,79,580.88	3,98,430.22 ↑	82.81%
20-08-2017	American Chicken Hot Dogs	16,429	$8,54,302.93	3,73,304.89 ↑	77.61%
20-02-2017	American Chicken Hot Dogs	16,427	$8,53,565.94	3,72,567.90 ↑	77.46%
03-03-2019	American Chicken Hot Dogs	16,427	$8,19,423.30	3,38,425.26 ↑	70.36%

Profits by Year, Quarter and Month

100%

2017 Qtr 1 January	34,49,002.17
2017 Qtr 1 February	30,28,399.27 (87.81%)
2017 Qtr 1 March	30,89,479.38 (102.02%)
2017 Qtr 2 April	23,78,290.75 (76.98%)
2017 Qtr 2 May	25,33,097.05 (106.51%)
2017 Qtr 2 June	36,66,306.54 (144.74%)
2017 Qtr 3 July	26,85,728.43 (73.25%)
2017 Qtr 3 August	32,74,902.20 (121.94%)
2017 Qtr 3 September	36,38,681.61 (111.11%)
2017 Qtr 4 October	25,27,499.00 (69.46%)
2017 Qtr 4 November	28,74,406.91 (113.73%)
2017 Qtr 4 December	29,89,042.66 (103.99%)
2018 Qtr 1 January	32,14,501.84 (107.54%)
2018 Qtr 1 February	29,75,829.45 (92.58%)
2018 Qtr 1 March	27,23,818.16 (91.53%)
2019 Qtr 1 January	12,81,340.73 (47.04%)
2019 Qtr 1 February	25,42,141.17 (198.4%)
2019 Qtr 1 March	30,95,855.46 (121.78%)
2019 Qtr 2 April	24,75,800.57 (79.97%)
2019 Qtr 2 May	19,23,715.15 (77.7%)
2019 Qtr 2 June	28,32,067.19 (147.22%)
2019 Qtr 3 July	28,36,772.24 (100.17%)
2019 Qtr 3 August	26,39,971.81 (93.06%)
2019 Qtr 3 September	31,25,954.68 (118.41%)
2019 Qtr 4 October	23,71,199.97 (75.86%)
2019 Qtr 4 November	24,96,950.09 (105.3%)
2019 Qtr 4 December	26,94,997.51 (107.93%)

78.1%

MONTHLY RECORDS

Year	Quarter	Month	Sales Amount	Change%
2017	Qtr 1	January	$83,13,016.02	100.00%
2017	Qtr 1	February	$71,63,218.44	-16.05%
2017	Qtr 1	March	$72,53,621.83	1.25%
2017	Qtr 2	April	$55,86,142.33	-29.85%
2017	Qtr 2	May	$58,49,664.04	4.50%
2017	Qtr 2	June	$85,60,207.11	31.66%
2017	Qtr 3	July	$63,05,816.43	-35.75%
2017	Qtr 3	August	$76,86,027.58	17.96%
2017	Qtr 3	September	$84,48,763.12	9.03%
2017	Qtr 4	October	$60,65,947.80	-39.28%
2017	Qtr 4	November	$67,88,433.27	10.64%
2017	Qtr 4	December	$69,78,917.15	2.73%
2018	Qtr 1	January	$75,54,685.37	7.62%
2018	Qtr 1	February	$66,52,728.42	-13.56%
2018	Qtr 1	March	$61,52,910.84	-8.12%
2018	Qtr 2	April		-Infinity
2019	Qtr 1	January	$31,70,346.02	100.00%
2019	Qtr 1	February	$64,77,566.63	51.06%
2019	Qtr 1	March	$76,58,844.24	15.42%
Total			**$18,14,56,833.11**	**100.00%**

Item	Prev Month	Sales Amount	Change%
American Beef Bologna		$2,730.18	100.00%
American Chicken Hot Dogs		$14,286.59	100.00%
American Corned Beef		$3,84,491.50	100.00%
American Pimento Loaf		$54,702.82	100.00%
American Potato Salad		$45,159.32	100.00%
American Roasted Chicken		$1,65,999.97	100.00%
American Sliced Ham		$846.40	100.00%
Applause Canned Mixed Fruit		$28,243.33	100.00%
Atomic Bubble Gum		$26,198.32	100.00%
Atomic Mint Chocolate Bar		$13,19,333.04	100.00%
Atomic Mints		$618.36	100.00%
Total		**$18,14,56,833.11**	**100.00%**

QUESTIONS AND ANSWERS

Q1) What's the source of data?

Ans) TheDataset wastaken fromiNeuron'sProvidedProject DescriptionDocument.
https://docs.google.com/spreadsheets/d/1h3EsPf-fTLrzpP7sGeyuRnGBXrdJRcXY
/edit?usp=sharing&ouid=105519103382792804653&rtpof=true&sd=true

Q2) What was the type of data?

Ans) Thedata was a combination of numerical and Categorical values.

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

Ans) Referslide 5 th forbetter Understanding

Q4) What techniques were you using for data?

Ans) -Removing unwanted attributes.

-Visualizing relation of independent variables with each other and output variables.

 -Checking and changing distribution of continuous values.

-Removing outliers -Cleaningdata and imputingifnull values are present.

-Transforming data to yield the desired result.

THANK YOU