

Amazon Sales Data Analysis in Python

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Introduction

- Sales Analysis is extremely important if you want to survive in the competitive business environment today.
- It leads to reducing costs and increasing profits by focusing on the strong products and services of the company.
- We have been given amazon sales data and our job is to find key metrics and factors along with finding meaningful relationships between attributes.



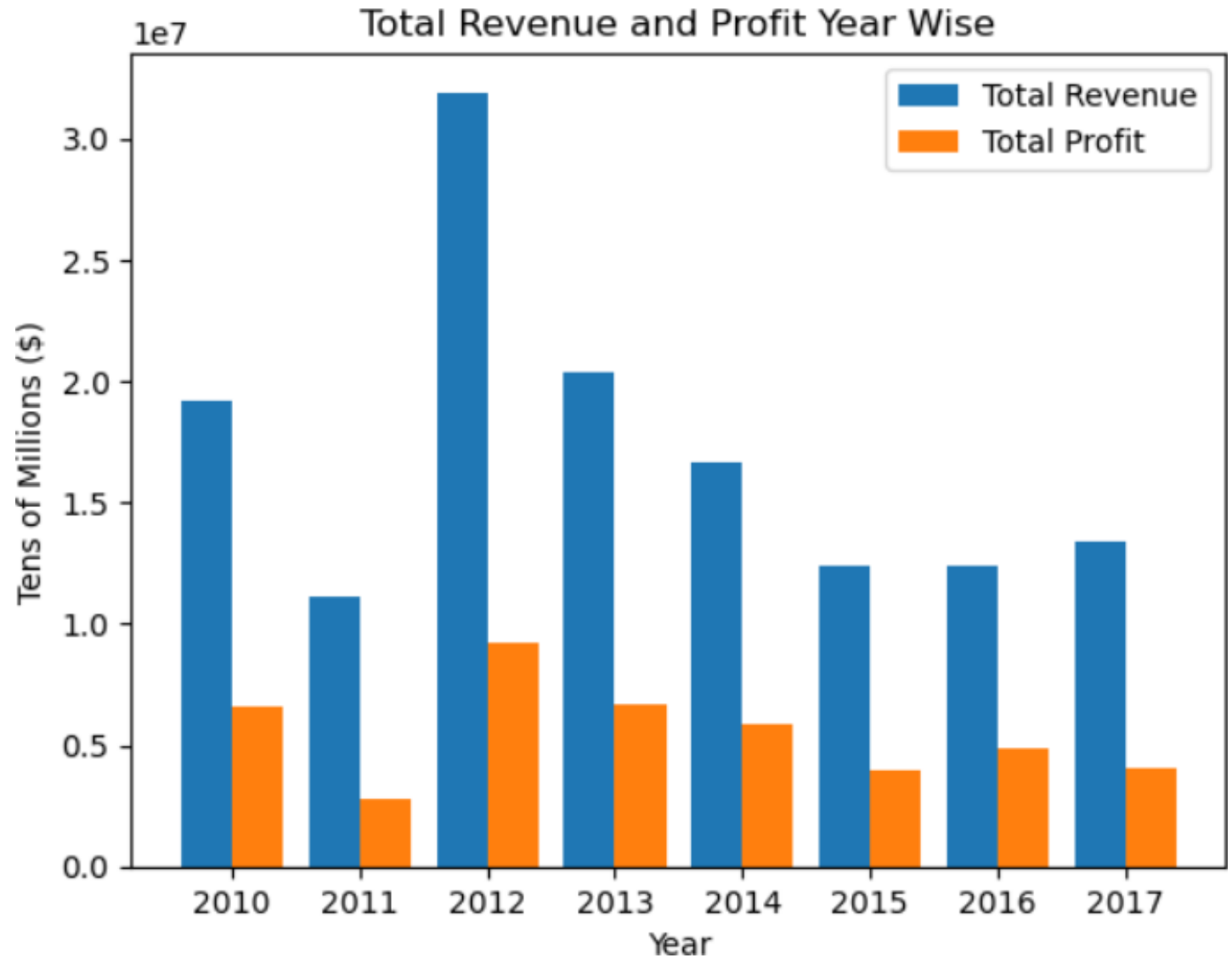
Basic Figures

- We can get many of the important figures of each column with a single command using the "describe" method.
- This method provides us with the count of entries in each column along with the mean, standard deviation, minimum, maximum and the three major quartiles.
- These figures are extremely important as they allow us to know the range of figures we are operating in for each attribute.

	Order ID	Units Sold	Unit Price	Unit Cost	Total Revenue	Total Cost	Total Profit
count	1.000000e+02	100.000000	100.000000	100.000000	1.000000e+02	1.000000e+02	1.000000e+02
mean	5.550204e+08	5128.710000	276.761300	191.048000	1.373488e+06	9.318057e+05	4.416820e+05
std	2.606153e+08	2794.484562	235.592241	188.208181	1.460029e+06	1.083938e+06	4.385379e+05
min	1.146066e+08	124.000000	9.330000	6.920000	4.870260e+03	3.612240e+03	1.258020e+03
25%	3.389225e+08	2836.250000	81.730000	35.840000	2.687212e+05	1.688680e+05	1.214436e+05
50%	5.577086e+08	5382.500000	179.880000	107.275000	7.523144e+05	3.635664e+05	2.907680e+05
75%	7.907551e+08	7369.000000	437.200000	263.330000	2.212045e+06	1.613870e+06	6.358288e+05
max	9.940222e+08	9925.000000	668.270000	524.960000	5.997055e+06	4.509794e+06	1.719922e+06

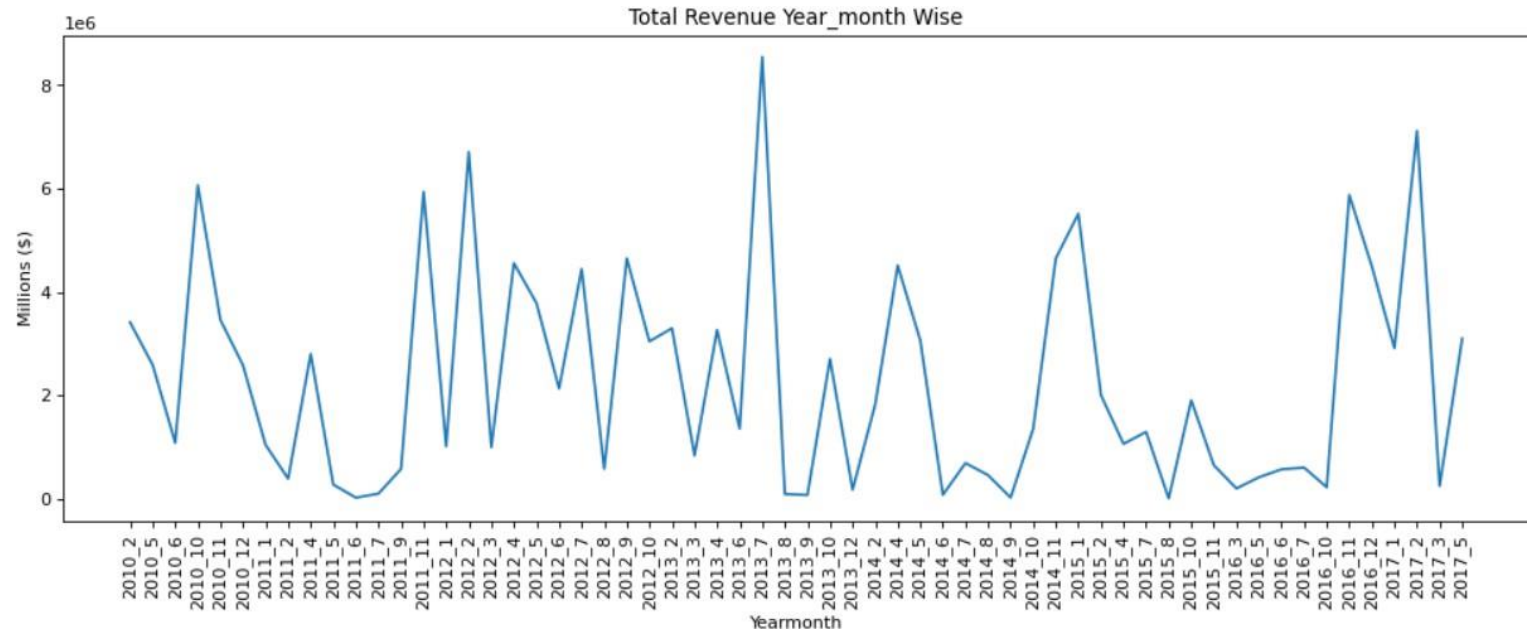
Yearly Distribution

- Grouping the data yearly, we get the Total Revenue, Cost and Profit per year.
- This data can be used to plot graphs and observe trends to make conclusions and decisions.
- This is the bar graph of the total Revenue and profit trends year wise.
- We can conclude that 2012 was the best year for sales and since then the sales are in a downtrend.



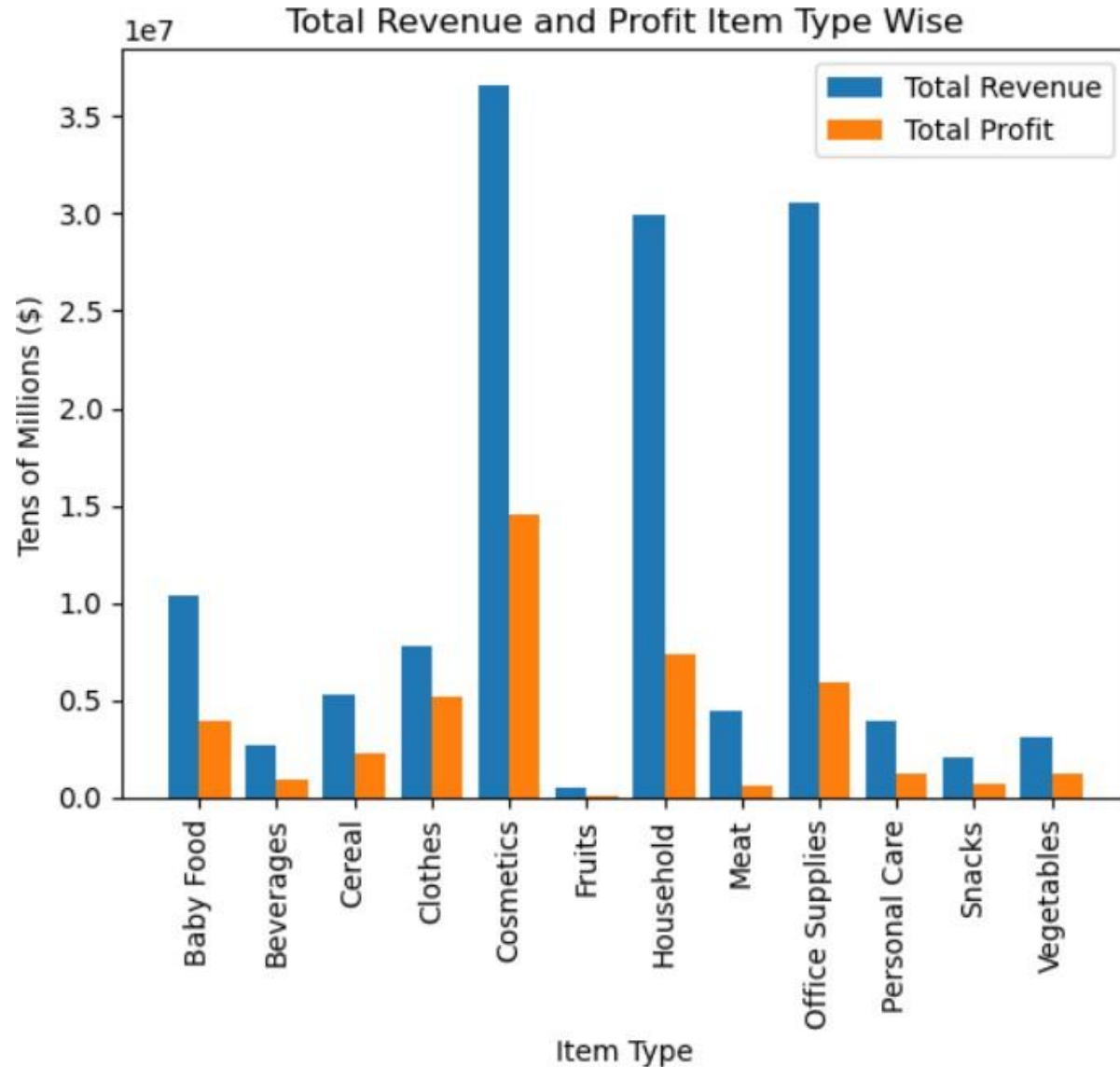
Monthly Distribution

- Grouping the data monthly, we get the Total Revenue, Cost and Profit per month.
- This data can be used to plot graphs and observe trends to make conclusions and decisions.
- This is the graph of the total Revenue trend month wise.
- Note that we can also read which year does the month belong to as the notation is YYYY_MM.



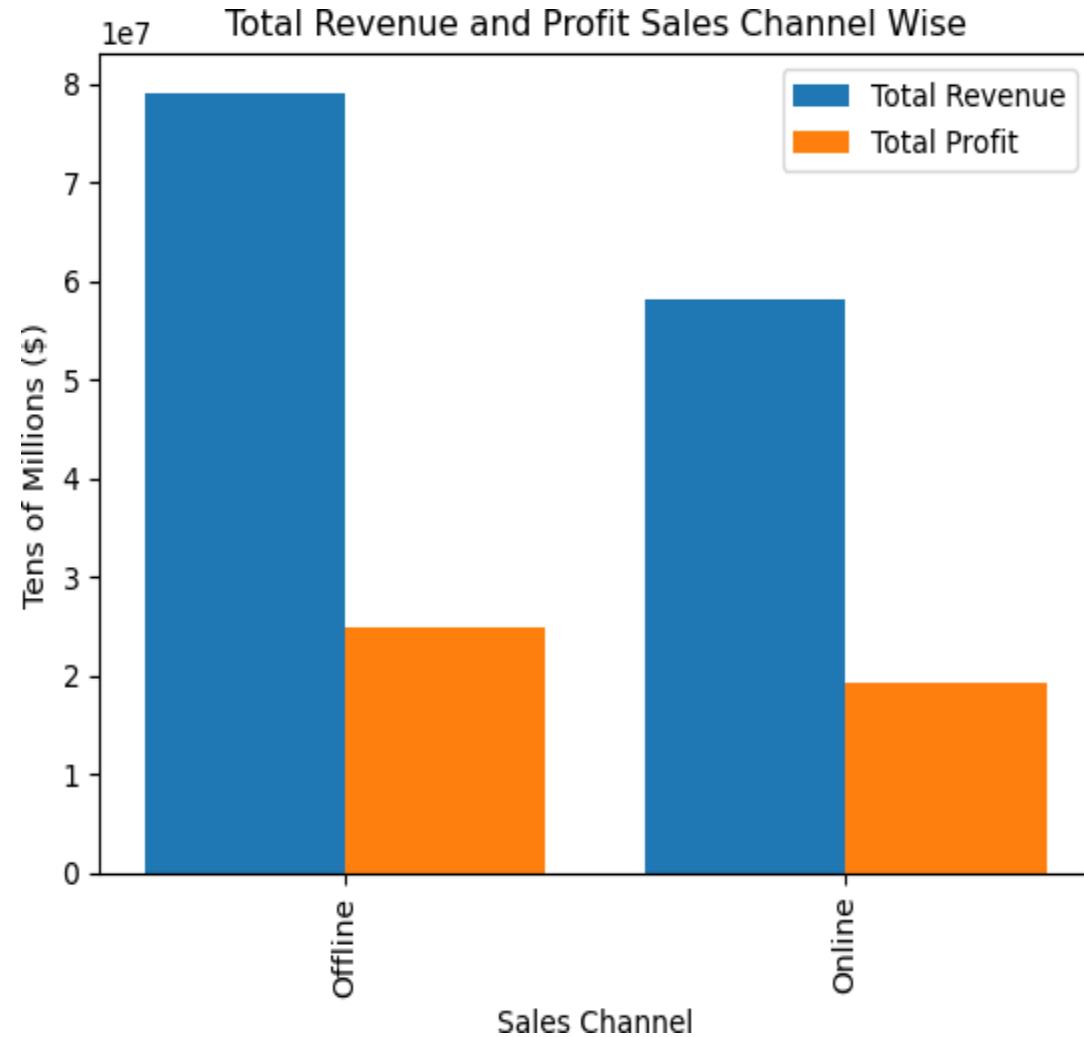
Item Wise Distribution

- Grouping the data Item Wise, We can get the Total Revenue and Profit figures for every category.
- This is the bar chart plotting the Total Revenue and Profit Item Type Wise.
- We can conclude that the most sold segment is Cosmetics.



Sales Channel Wise

- Grouping the data Sales Channel Wise, We can get the Total Revenue and Profit figures for both offline and online medium.
- This is the bar chart plotting the Total Revenue and Profit Sales Channel Wise.
- We can conclude that Offline Channel is still the major source of sales.



THANK
YOU

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