



## Centre of Excellence in Artificial Intelligence

### AI42001:Machine Learning Foundations and Applications

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**Assignment -1**

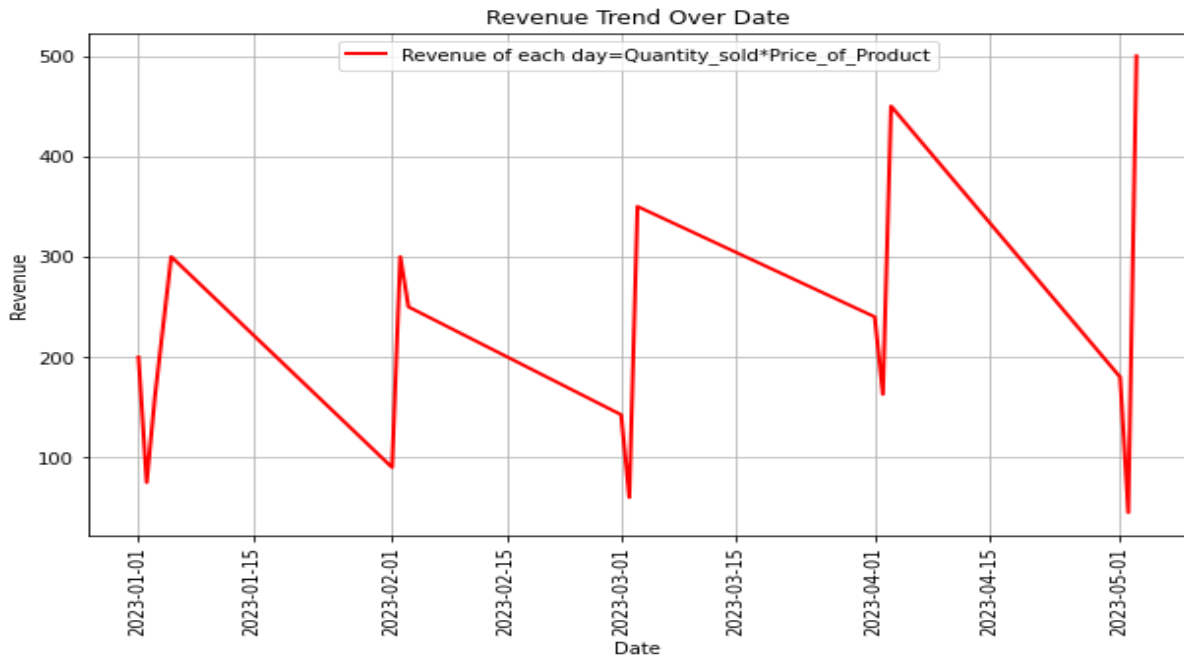
**a. Experiment 1: A table containing the first 8 rows to get an overview of the data.**

	OrderID	Product	Quantity	Price	Date
0	1	Product_A	10	20.0	01-01-2023
1	2	Product_B	5	15.0	02-01-2023
2	3	Product_A	8	20.0	03-01-2023
3	4	Product_C	12	25.0	05-01-2023
4	5	Product_B	6	15.0	01-02-2023
5	6	Product_A	15	20.0	02-02-2023
6	7	Product_C	10	25.0	03-02-2023
7	8	Product_A	7	NaN	01-03-2023

**b. Experiment 2: A table containing each group name and corresponding number of missing values.**

	Column names	Count of Missing Values
0	OrderID	0
1	Product	0
2	Quantity	0
3	Price	2
4	Date	0

**c. Experiment 3: A line plot of the revenue trend over date. Proper labeling on the plot should be there (X-label, Y-label, Title, and legend).**



**d. Experiment 4: Mention total number of orders and total revenue.**

Total Number of Orders: 16  
Total Revenue Generated: 3505.36

**e. Experiment 5: A table containing three individual products and corresponding average price. A bar plot which plots the average price for each product. Mention the most sold product.**

Average Price of Each Product:

	Product	Average_Price
0	Product_A	20.040984
1	Product_B	16.648352
2	Product_C	25.000000

Top Most Sold Products:

	Product	Quantity
2	Product_C	74
0	Product_A	61
1	Product_B	26

As we can see the most sold product is Product\_C .

