## Artificial Intelligence and Machine Learning

Project Report

Semester-IV (Batch-2022)

CASE STUDY ABOUT AMAZON E-PURCHASES

**LINK**[**:-** https://drive.google.com/drive/folders/1uCCEct\_zxpuoD2YNL40llLyjP20HrvjV](about:blank)

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Description automatically generated with low confidence

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**Description about Case Study: -**

* Read dataset Amazon Purchases
* Display Top 10 rows
* Display the Last 10 rows
* Check the datatype of Each column
* Check null values in the Dataset
* How many rows and columns are in our dataset
* Highest and lowest purchase price in the dataset
* Average purchase price
* How many people have French 'fr' as their Language
* The job title contains engineer
* Find the email of the person with the following IP address: 132.207.160.22
* How many people have Mastercard as their Credit Card Provider and Purchased above 50?
* Find the Email of the person with the following Credit Card number:4105595335494659
* How Many People Purchase During the AM and How Many People Purchase During PM?
* How Many People Have a Credit Card That Expires In 2020
* Top 5 Most Popular Email Providers (Gmail.com, Yahoo.com, etc.)

**Library: -**

Pandas

**Methods: -**

1. read\_csv():
2. Description: Reads a CSV file and converts it into a data frame.
3. tail():
4. Description: Displays the last few rows of the data frame.
5. head():
6. Description: Displays the first few rows of the data frame.
7. shape():
8. Description: Returns the shape (number of rows, number of columns) of the data frame.
9. info():
10. Description: Provides basic information about the data frame, such as column types and missing values.
11. isnull():
12. Description: Returns True/False for each value in the data frame, indicating whether the value is missing (NaN) or not.
13. sum():
14. Description: Calculates the sum of values in each column of the data frame.
15. drop():
16. Description: Removes specific rows or columns from the data frame.
17. value\_counts():
18. Description: Counts the unique values in a specific column of the data frame.
19. nunique():
20. Description: Returns the count of unique values in a specific column of the data frame.
21. contains():
22. Description: Checks if a specified substring or value is present in a column of the data frame.
23. max():
24. Description: Returns the maximum value in a column of the data frame.
25. min():
26. Description: Returns the minimum value in a column of the data frame.
27. mean():
28. Description: Calculates the mean (average) value of a column in the data frame.
29. len():
30. Description: Returns the number of rows in the data frame
31. value\_counts():
32. Description: Counts the unique values in a specific column of the data frame.
33. apply():
34. Description: Applies a function to transform the values in the data frame.