## Artificial Intelligence and Machine Learning

Project Report

Semester-IV (Batch-2022)

Case Study: Amazon Purchases Dataset

URl: <https://drive.google.com/file/d/1FLMeqr_Dg59NwyEbrXuvDPovJgs7cGnD/view?usp=sharing>

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Description automatically generated with low confidence

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**Description:**

1. Display Top 10 rows
2. Display Last 10 rows
3. Check datatype of Each column
4. check null values in the DataSet
5. how many rows and columns in our dataset
6. Highest and lowest purchase price in dataset
7. Average purchase price
8. how many people have French 'fr' as their Language
9. job title contains engineer
10. find email of the person with the following IP address: 132.207.160.22
11. how many people have Mastercard as their Credit Card Provider and Made A purchase above 50?
12. Find Email of the person with the following Credit Card number:4105595335494659
13. how Many people Purchase During The Am and How Many People Purchase During Pm?
14. How Many People Have A credit Card That Expries In 2020
15. Top 5 Most Popular EMail providers (eg Gmail.com, Yahoo.com, etc.)

**Libraries used:**

Numpy,Pandas.

**Methods used:**

1. Head: The "head" method in Pandas is used to display the first few rows of a DataFrame or Series.
2. Tail: The "tail" method in Pandas is used to display the last few rows of a DataFrame or Series.
3. Dtypes: Returns the series with the datatype of each column.
4. Isnull(): Detect missing values for an array-like object.
5. Shape: used to obtain the shape of a given array.
6. Max: the max() method searches column-wise and returns the minimum value for each row.
7. Min: The min() method returns a Series with the minimum value of each column.
8. Mean: It is computed by adding up all the values in the series and then dividing by the total number of values
9. Len: Compute the length of each element in the Series/Index.
10. Isin: checks if the Dataframe contains the specified value(s)
11. info():Provides basic information about the data frame, such as column types and missing values.