## Artificial Intelligence and Machine Learning

Project Report

Semester-IV (Batch-2022)

**Case Study**: - Amazon Purchases Dataset

URL[https://drive.google.com/file/d/1xswCN4vtxHmkfHT4Mx3PIUpQl1LrR533/](https://drive.google.com/file/d/1xswCN4vtxHmkfHT4Mx3PIUpQl1LrR533/view?usp=sharing)

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Description automatically generated with low confidence

**Supervised By: Submitted By:**

Rajeev Thakur Yajat Dureja

Roll Number: -2210990970

Group - 14

**Department of Computer Science and Engineering**

## Chitkara University Institute of Engineering & Technology,

## Chitkara University, Punjab

**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

**Library: -**

* Pandas

**Methods: -**

1. **read\_csv():** Description: Reads a CSV file and converts it into a data frame.
2. **tail():** Description: Displays the last few rows of the data frame.
3. **head():** Description: Displays the first few rows of the data frame.
4. **shape():** Description: Returns the shape (number of rows, number of columns) of the data frame.
5. **info():** Description: Provides basic information about the data frame, such as column types and missing values.
6. **isnull():** Description: Returns True/False for each value in the data frame, indicating whether the value is missing (NaN) or not.
7. **contains():** Description: Checks if a specified substring or value is present in a column of the data frame.
8. **max():** Description: Returns the maximum value in a column of the data frame.
9. **min():** Description: Returns the minimum value in a column of the data frame.
10. **mean():** Description: Calculates the mean (average) value of a column in the data frame.