## **Front End Engineering-II /Artificial**

## **Intelligence and Machine Learning**

Project Report

Semester-IV (Batch-2022)

**Case Study-:**Salaries Dataset

Url-: https://drive.google.com/drive/folders/1sCJizHS8ArMhLyebAlICCfq\_H7OE7ekz?usp=drive\_link

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Description automatically generated with low confidence

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**Description about Case Study: -**

* Read dataset Salaries
* Display Top 10 rows
* Display the Last 10 rows
* Check the shape of dataset
* Check null values in the Dataset
* How many rows and columns are in our dataset, the datatypes of each column, and the memory requirement
* Drop ID, Notes, Agency, and Status Columns
* Find the occurrence of Employee name (Top 5)
* Find the number of unique job titles
* Total number of job titles containing the captain
* Display all Employee names from the fire department
* Find the minimum, maximum, and average base pay
* Replace ‘Not Provided’ in the Employee Column with NaN
* Drop the rows that have more than 5 missing values
* Find the job title of Albert Pardini
* How much does Albert Pardini make?
* Display the name of the person having the highest base pay
* Display the average base pay of all employees per year
* Find the average base pay of all employees per job title
* Find the average base pay of all employees having job title Accountant
* Find Top 5 most common jobs

**Library: -**

Pandas

**Methods: -**

**read\_csv():**Description: Reads a CSV file and converts it into a data frame.

**tail():**Description: Displays the last few rows of the data frame.

**head():**Description: Displays the first few rows of the data frame.

**shape():**Description: Returns the shape (number of rows, number of columns) of the data frame.

**info():**Description: Provides basic information about the data frame, such as column types and missing values.

**isnull():**Description: Returns True/False for each value in the data frame, indicating whether the value is missing (NaN) or not.

**sum():**Description: Calculates the sum of values in each column of the data frame.

**dropna():**Description: used to remove missing (NaN) values from a Data Frame or Series

**contains():**Description: Checks if a specified substring or value is present in a column of the data frame.

**max():**Description: Returns the maximum value in a column of the data frame.

**min():**Description: Returns the minimum value in a column of the data frame.

**mean():**Description: Calculates the mean (average) value of a column in the data frame.

**len():**Description: Returns the number of rows in the data frame

**sort\_values():**Description: Helps arrange the data in either ascending or descending order based on the values in the specified columns

**to\_numeric:**Description: Used to convert the values of a Series to numeric format.

**value\_counts():**Description: Counts the unique values in a specific column of the data frame.

**replace():**Description: Used to replace values in a Data Frame or Series.