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**Roll No : 20U437**

**Div : 4**

import pandas as pd  
df=pd.read\_csv('https://archive.ics.uci.edu/ml/machine-learning-databases/iris/iris.data')  
df

5.1 3.5 1.4 0.2 Iris-setosa  
0 4.9 3.0 1.4 0.2 Iris-setosa  
1 4.7 3.2 1.3 0.2 Iris-setosa  
2 4.6 3.1 1.5 0.2 Iris-setosa  
3 5.0 3.6 1.4 0.2 Iris-setosa  
4 5.4 3.9 1.7 0.4 Iris-setosa  
.. ... ... ... ... ...  
144 6.7 3.0 5.2 2.3 Iris-virginica  
145 6.3 2.5 5.0 1.9 Iris-virginica  
146 6.5 3.0 5.2 2.0 Iris-virginica  
147 6.2 3.4 5.4 2.3 Iris-virginica  
148 5.9 3.0 5.1 1.8 Iris-virginica  
  
[149 rows x 5 columns]

df.columns=['sepal\_length','sepal\_width','petal\_length','petal\_width','Class']

df.head()

sepal\_length sepal\_width petal\_length petal\_width Class  
0 4.9 3.0 1.4 0.2 Iris-setosa  
1 4.7 3.2 1.3 0.2 Iris-setosa  
2 4.6 3.1 1.5 0.2 Iris-setosa  
3 5.0 3.6 1.4 0.2 Iris-setosa  
4 5.4 3.9 1.7 0.4 Iris-setosa

df.shape

(149, 5)

df.info()

<class 'pandas.core.frame.DataFrame'>  
RangeIndex: 149 entries, 0 to 148  
Data columns (total 5 columns):  
 # Column Non-Null Count Dtype   
--- ------ -------------- -----   
 0 sepal\_length 149 non-null float64  
 1 sepal\_width 149 non-null float64  
 2 petal\_length 149 non-null float64  
 3 petal\_width 149 non-null float64  
 4 Class 149 non-null object   
dtypes: float64(4), object(1)  
memory usage: 5.9+ KB

df.isna().sum()

sepal\_length 0  
sepal\_width 0  
petal\_length 0  
petal\_width 0  
Class 0  
dtype: int64

df['sepal\_length'].mean()

5.848322147651008

df['sepal\_length'].mode()

0 5.0  
dtype: float64

df['sepal\_length'].median()

5.8

print('Mean:',df['sepal\_length'].mean())  
print('Mode:',df['sepal\_length'].mode())  
print('Median:',df['sepal\_length'].median())  
print('Standard\_Deviation:',df['sepal\_length'].std())

Mean: 5.848322147651008  
Mode: 0 5.0  
dtype: float64  
Median: 5.8  
Standard\_Deviation: 0.8285940572656172

df.describe()

sepal\_length sepal\_width petal\_length petal\_width  
count 149.000000 149.000000 149.000000 149.000000  
mean 5.848322 3.051007 3.774497 1.205369  
std 0.828594 0.433499 1.759651 0.761292  
min 4.300000 2.000000 1.000000 0.100000  
25% 5.100000 2.800000 1.600000 0.300000  
50% 5.800000 3.000000 4.400000 1.300000  
75% 6.400000 3.300000 5.100000 1.800000  
max 7.900000 4.400000 6.900000 2.500000

df['sepal\_length'].describe()

count 149.000000  
mean 5.848322  
std 0.828594  
min 4.300000  
25% 5.100000  
50% 5.800000  
75% 6.400000  
max 7.900000  
Name: sepal\_length, dtype: float64

df.median()

/usr/local/lib/python3.7/dist-packages/ipykernel\_launcher.py:1: FutureWarning: Dropping of nuisance columns in DataFrame reductions (with 'numeric\_only=None') is deprecated; in a future version this will raise TypeError. Select only valid columns before calling the reduction.  
 """Entry point for launching an IPython kernel.

sepal\_length 5.8  
sepal\_width 3.0  
petal\_length 4.4  
petal\_width 1.3  
dtype: float64

df.mode()

sepal\_length sepal\_width petal\_length petal\_width Class  
0 5.0 3.0 1.5 0.2 Iris-versicolor  
1 NaN NaN NaN NaN Iris-virginica

df.mean()

/usr/local/lib/python3.7/dist-packages/ipykernel\_launcher.py:1: FutureWarning: Dropping of nuisance columns in DataFrame reductions (with 'numeric\_only=None') is deprecated; in a future version this will raise TypeError. Select only valid columns before calling the reduction.  
 """Entry point for launching an IPython kernel.

sepal\_length 5.848322  
sepal\_width 3.051007  
petal\_length 3.774497  
petal\_width 1.205369  
dtype: float64