

Name-Rupali Sunil Khairnar.

Roll No-13219

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localhost:8888/notebooks/Desktop/Untitled1.ipynb?kernel_name=python3

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```
In [1]: import numpy as np
In [2]: import pandas as pd
In [4]: df=pd.read_csv(r"C:\Users\System21\Desktop\Academic_Performance.csv")
In [5]: df
```

Out[5]:

	math_score	reading_score	writing_score	placement_score	clubjoin_year	placement_offer_count	Gender
0	65.0	81.0	77.0	83	2021	2	Female
1	64.0	78.0	67.0	77	2019	2	Male
2	64.0	76.0	66.0	76	2019	0	Male
3	80.0	50.0	80.0	78	2020	2	Female
4	66.0	85.0	66.0	60	2021	3	Female
5	NaN	79.0	77.0	95	2019	3	Male
6	79.0	NaN	76.0	84	2019	2	Female
7	20.0	85.0	NaN	96	2021	3	Female
8	68.0	94.0	71.0	93	2020	3	Female
9	63.0	76.0	71.0	92	2019	3	Female
10	67.0	88.0	5.0	88	2021	3	Female

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10	67.0	88.0	5.0	88	2021	3	Female
11	NaN	89.0	79.0	86	2018	3	Male
12	79.0	93.0	75.0	82	2018	2	Male
13	75.0	NaN	67.0	100	2020	3	Male
14	72.0	80.0	61.0	100	2019	3	Male
15	100.0	88.0	61.0	90	2021	5	Male
16	63.0	84.0	68.0	99	2018	3	Female
17	60.0	NaN	78.0	86	2021	3	Male
18	88.0	91.0	130.0	77	2021	2	Male
19	62.0	83.0	65.0	82	2021	1	Male
20	62.0	89.0	72.0	90	2019	3	Female
21	63.0	90.0	74.0	94	2018	3	Male
22	70.0	60.0	72.0	89	2018	3	Female
23	75.0	94.0	72.0	91	2021	3	Male
24	71.0	91.0	80.0	82	2018	2	Male
25	79.0	88.0	75.0	87	2020	3	Male
26	75.0	88.0	78.0	20	2019	2	Female
27	80.0	150.0	100.0	95	2018	3	Male
28	62.0	88.0	66.0	80	2021	2	Female
29	71.0	79.0	70.0	97	2021	3	Male

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25	79.0	88.0	75.0	87	2020	3	Male
26	75.0	88.0	78.0	20	2019	2	Female
27	80.0	150.0	100.0	95	2018	3	Male
28	62.0	88.0	66.0	80	2021	2	Female
29	71.0	79.0	70.0	97	2021	3	Male

```
In [10]: df.loc[:, 'math_score'].mean()
Out[10]: 68.67857142857143

In [12]: df.loc[:, 'math_score'].median()
Out[12]: 68.0

In [13]: 1 df.loc[:, 'math_score'].mode()
Out[13]: 0    62.0
         1    63.0
         2    75.0
         3    79.0
         Name: math_score, dtype: float64

In [14]: df.loc[:, 'math_score'].min(skipna = False)
```

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```
Out[12]: 68.0

In [13]: 1 df.loc[:, 'math_score'].mode()
Out[13]: 0    62.0
         1    63.0
         2    75.0
         3    79.0
         Name: math_score, dtype: float64

In [14]: df.loc[:, 'math_score'].min(skipna = False)
Out[14]: nan

In [15]: df.loc[:, 'math_score'].max(skipna = False)
Out[15]: nan

In [16]: df.loc[:, 'math_score'].std()
Out[16]: 12.829519119848603

In [18]: df.groupby(['Gender'])['math_score'].mean()
Out[18]: Gender
         Female    64.615385
```

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```
In [1]: import pandas as pd
In [2]: import numpy as np
In [3]: import matplotlib.pyplot as plt
In [7]: df=pd.read_csv(r"C:\Users\System21\Desktop\iris.csv")
In [8]: df
Out[8]:
```

	sepal.length	sepal.width	petal.length	petal.width	variety
0	5.1	3.5	1.4	0.2	Setosa
1	4.9	3.0	1.4	0.2	Setosa
2	4.7	3.2	1.3	0.2	Setosa
3	4.6	3.1	1.5	0.2	Setosa
4	5.0	3.6	1.4	0.2	Setosa
...
145	6.7	3.0	5.2	2.3	Virginica
146	6.3	2.5	5.0	1.9	Virginica
147	6.5	3.0	5.2	2.0	Virginica
148	6.2	3.4	5.4	2.3	Virginica
149	5.9	3.0	5.1	1.8	Virginica

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```
147 6.5 3.0 5.2 2.0 Virginica
148 6.2 3.4 5.4 2.3 Virginica
149 5.9 3.0 5.1 1.8 Virginica
150 rows x 5 columns
In [9]: print('Setosa')
setosa=df['variety']=='Setosa'
print(df[setosa].describe())
Setosa
sepal.length sepal.width petal.length petal.width
count 0.0 0.0 0.0 0.0
mean NaN NaN NaN NaN
std NaN NaN NaN NaN
min NaN NaN NaN NaN
25% NaN NaN NaN NaN
50% NaN NaN NaN NaN
75% NaN NaN NaN NaN
max NaN NaN NaN NaN
In [11]: print('Versicolor')
versicolor=df['variety']=='Versicolor'
print(df[versicolor].describe())
Versicolor
sepal.length sepal.width petal.length petal.width
count 50.000000 50.000000 50.000000 50.000000
mean 5.936000 2.770000 4.260000 1.326000
std 0.516171 0.313298 0.469911 0.107753
```

iris.csv - GitHub
gist.github.com

Memory usage: 65.6 MB

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std 0.516171 0.313798 0.469911 0.197753
min 4.900000 2.000000 3.000000 1.000000
25% 5.600000 2.525000 4.000000 1.200000
50% 5.900000 2.800000 4.350000 1.300000
75% 6.300000 3.000000 4.600000 1.500000
max 7.000000 3.400000 5.100000 1.800000

```
In [12]: print('Virginica')
virginica=df['variety']=='Virginica'
print(df[virginica].describe())
```

Virginica

	sepal.length	sepal.width	petal.length	petal.width
count	50.00000	50.00000	50.00000	50.00000
mean	6.58800	2.97400	5.55200	2.02600
std	0.63588	0.322497	0.551895	0.27465
min	4.90000	2.20000	4.50000	1.40000
25%	6.22500	2.80000	5.10000	1.80000
50%	6.50000	3.00000	5.55000	2.00000
75%	6.90000	3.17500	5.87500	2.30000
max	7.90000	3.80000	6.90000	2.50000

```
In [13]: df[df['variety']=='Virginica']
```

Out[13]:

	sepal.length	sepal.width	petal.length	petal.width	variety
100	6.3	3.3	6.0	2.5	Virginica
101	5.8	2.7	5.1	1.9	Virginica
102	7.1	3.0	5.9	2.1	Virginica

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102	7.1	3.0	5.9	2.1	Virginica
103	6.3	2.9	5.6	1.8	Virginica
104	6.5	3.0	5.8	2.2	Virginica
105	7.6	3.0	6.6	2.1	Virginica
106	4.9	2.5	4.5	1.7	Virginica
107	7.3	2.9	6.3	1.8	Virginica
108	6.7	2.5	5.8	1.8	Virginica
109	7.2	3.6	6.1	2.5	Virginica
110	6.5	3.2	5.1	2.0	Virginica
111	6.4	2.7	5.3	1.9	Virginica
112	6.8	3.0	5.5	2.1	Virginica
113	5.7	2.5	5.0	2.0	Virginica
114	5.8	2.8	5.1	2.4	Virginica
115	6.4	3.2	5.3	2.3	Virginica
116	6.5	3.0	5.5	1.8	Virginica
117	7.7	3.8	6.7	2.2	Virginica
118	7.7	2.6	6.9	2.3	Virginica
119	6.0	2.2	5.0	1.5	Virginica
120	6.9	3.2	5.7	2.3	Virginica
121	5.6	2.8	4.9	2.0	Virginica
122	7.7	2.8	6.7	2.0	Virginica
123	6.3	2.7	4.9	1.8	Virginica
124	6.7	3.3	5.7	2.1	Virginica
125	7.2	3.2	6.0	1.8	Virginica
126	6.2	2.8	4.8	1.8	Virginica
127	6.1	3.0	4.9	1.8	Virginica
128	6.4	2.8	5.6	2.1	Virginica

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