

```
import pandas as pd
```

```
df = pd.read_csv("IRIS.csv")
print(df.head())
print(df)
```

```

sepal_length  sepal_width  petal_length  petal_width  species
0             5.1         3.5          1.4          0.2  Iris-setosa
1             4.9         3.0          1.4          0.2  Iris-setosa
2             4.7         3.2          1.3          0.2  Iris-setosa
3             4.6         3.1          1.5          0.2  Iris-setosa
4             5.0         3.6          1.4          0.2  Iris-setosa
sepal_length  sepal_width  petal_length  petal_width  species
0             5.1         3.5          1.4          0.2  Iris-setosa
1             4.9         3.0          1.4          0.2  Iris-setosa
2             4.7         3.2          1.3          0.2  Iris-setosa
3             4.6         3.1          1.5          0.2  Iris-setosa
4             5.0         3.6          1.4          0.2  Iris-setosa
..          ...         ...          ...          ...          ...
145          6.7         3.0          5.2          2.3  Iris-virginica
146          6.3         2.5          5.0          1.9  Iris-virginica
147          6.5         3.0          5.2          2.0  Iris-virginica
148          6.2         3.4          5.4          2.3  Iris-virginica
149          5.9         3.0          5.1          1.8  Iris-virginica

```

[150 rows x 5 columns]

```
species_setosa = df[df['species'] == 'Iris-setosa']
species_versicolor = df[df['species'] == 'Iris-versicolor']
species_virginica = df[df['species'] == 'Iris-virginica']
```

```
def get_statistics(species_df):
    print("\nStatistical Details:")
    print(f"Mean:\n{species_df.mean()}")
    print(f"\nStandard Deviation:\n{species_df.std()}")
    print(f"\n25th Percentile:\n{species_df.quantile(0.25)}")
    print(f"\n50th Percentile (Median):\n{species_df.quantile(0.50)}")
    print(f"\n75th Percentile:\n{species_df.quantile(0.75)}")
    print(f"\nMax:\n{species_df.max()}")
    print(f"\nMin:\n{species_df.min()}")
    print(f"\nCount:\n{species_df.count()}")
```

```
print("Iris-setosa:")
get_statistics(species_setosa.drop(columns='species'))
# print("\nIris-versicolor:")
# get_statistics(species_versicolor.drop(columns='species'))
# print("\nIris-virginica:")
# get_statistics(species_virginica.drop(columns='species'))
```

↩ Iris-setosa:

Statistical Details:

Mean:

```
sepal_length    5.006
sepal_width     3.418
petal_length     1.464
petal_width     0.244
dtype: float64
```

Standard Deviation:

```
sepal_length    0.352490
sepal_width     0.381024
petal_length     0.173511
petal_width     0.107210
dtype: float64
```

25th Percentile:

```
sepal_length    4.800
sepal_width     3.125
petal_length     1.400
petal_width     0.200
Name: 0.25, dtype: float64
```

50th Percentile (Median):

```
sepal_length    5.0
sepal_width     3.4
petal_length     1.5
petal_width     0.2
Name: 0.5, dtype: float64
```

75th Percentile:

```
sepal_length    5.200
```

```
sepal_width    3.675
petal_length    1.575
petal_width     0.300
Name: 0.75, dtype: float64
```

```
Max:
sepal_length    5.8
sepal_width     4.4
petal_length     1.9
petal_width     0.6
dtype: float64
```

```
Min:
sepal_length    4.3
sepal_width     2.3
petal_length     1.0
petal_width     0.1
dtype: float64
```

```
Count:
sepal_length    50
sepal_width     50
petal_length     50
petal_width     50
dtype: int64
```