

assi3b

January 27, 2026

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[1]: import pandas as pd
import numpy as np
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[3]: data = pd.read_csv("Iris.csv")
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[6]: print(data.head())
```

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
0	1	5.1	3.5	1.4	0.2	Iris-setosa
1	2	4.9	3.0	1.4	0.2	Iris-setosa
2	3	4.7	3.2	1.3	0.2	Iris-setosa
3	4	4.6	3.1	1.5	0.2	Iris-setosa
4	5	5.0	3.6	1.4	0.2	Iris-setosa

```
[10]: species_list = data['Species'].unique()
```

```
[16]: for Species in species_list:
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```
    print("\n=====")
    print("Statistics for:", Species)
    print("=====")

    species_data = data[data['Species'] == Species]

    numeric_data = species_data.iloc[:, :-1]

    print("\nMean:\n", numeric_data.mean())

    print("\nStandard Deviation:\n", numeric_data.std())

    print("\nPercentiles (25%, 50%, 75%):\n")
    print(numeric_data.quantile([0.25, 0.50, 0.75]))
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Statistics for: Iris-setosa
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Mean:

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    Id                25.500
SepallLengthCm       5.006
SepalWidthCm         3.418
PetalLengthCm        1.464
PetalWidthCm         0.244
dtype: float64

```

Standard Deviation:

```

    Id                14.577380
SepallLengthCm       0.352490
SepalWidthCm         0.381024
PetalLengthCm        0.173511
PetalWidthCm         0.107210
dtype: float64

```

Percentiles (25%, 50%, 75%):

	Id	SepallLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
0.25	13.25	4.8	3.125	1.400	0.2
0.50	25.50	5.0	3.400	1.500	0.2
0.75	37.75	5.2	3.675	1.575	0.3

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Statistics for: Iris-versicolor
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Mean:

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    Id                75.500
SepallLengthCm       5.936
SepalWidthCm         2.770
PetalLengthCm        4.260
PetalWidthCm         1.326
dtype: float64

```

Standard Deviation:

```

    Id                14.577380
SepallLengthCm       0.516171
SepalWidthCm         0.313798
PetalLengthCm        0.469911
PetalWidthCm         0.197753
dtype: float64

```

Percentiles (25%, 50%, 75%):

	Id	SepallLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
0.25	63.25	5.6	2.525	4.00	1.2
0.50	75.50	5.9	2.800	4.35	1.3
0.75	87.75	6.3	3.000	4.60	1.5

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Statistics for: Iris-virginica
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Mean:

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   Id      125.500
SepalLengthCm    6.588
SepalWidthCm     2.974
PetalLengthCm    5.552
PetalWidthCm     2.026
dtype: float64
```

Standard Deviation:

```
   Id      14.577380
SepalLengthCm    0.635880
SepalWidthCm     0.322497
PetalLengthCm    0.551895
PetalWidthCm     0.274650
dtype: float64
```

Percentiles (25%, 50%, 75%):

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
0.25	113.25	6.225	2.800	5.100	1.8
0.50	125.50	6.500	3.000	5.550	2.0
0.75	137.75	6.900	3.175	5.875	2.3

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