```python
import pandas as pd
iris = pd.read_csv('/content/Iris.csv')

print(iris.head())
grouped_data = iris.groupby('Species').describe()

print("\nSummary statistics for each species:")
print(grouped_data)

iris_setosa = iris[iris['Species'] == 'Iris-setosa']
iris_versicolor = iris[iris['Species'] == 'Iris-versicolor']
iris_virginica = iris[iris['Species'] == 'Iris-virginica']


setosa_stats = iris_setosa.describe()
versicolor_stats = iris_versicolor.describe()
virginica_stats = iris_virginica.describe()


print("\nIris Setosa Statistics:")
print(setosa_stats)

print("\nIris Versicolor Statistics:")
print(versicolor_stats)

print("\nIris Virginica Statistics:")
print(virginica_stats)

numeric_columns=['SepalLengthCm', 'SepalWidthCm', 'PetalLengthCm', 'PetalWidthCm']
for column in numeric_columns:
  iris_setosa[column] = pd.to_numeric(iris_setosa[column], errors='coerce')

setosa_25th = iris_setosa.quantile(0.25, numeric_only=True)
setosa_75th = iris_setosa.quantile(0.75, numeric_only=True)
print("\nIris Setosa 25th and 75th Percentiles:")
print(setosa_25th)
print(setosa_75th)
```

```
     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

Summary statistics for each species:
                   Id                                                    \
                count   mean       std    min     25%     50%     75%    max
Species
Iris-setosa      50.0   25.5  14.57738    1.0   13.25    25.5   37.75   50.0
Iris-versicolor  50.0   75.5  14.57738   51.0   63.25    75.5   87.75  100.0
Iris-virginica   50.0  125.5  14.57738  101.0  113.25   125.5  137.75  150.0

                SepalLengthCm          ... PetalLengthCm       PetalWidthCm  \
                        count   mean   ...           75%  max         count
Species                               ...
Iris-setosa              50.0  5.006  ...         1.575  1.9          50.0
Iris-versicolor          50.0  5.936  ...         4.600  5.1          50.0
Iris-virginica           50.0  6.588  ...         5.875  6.9          50.0


                  mean       std  min  25%  50%  75%  max
Species
Iris-setosa      0.244  0.107210  0.1  0.2  0.2  0.3  0.6
Iris-versicolor  1.326  0.197753  1.0  1.2  1.3  1.5  1.8
Iris-virginica   2.026  0.274650  1.4  1.8  2.0  2.3  2.5

[3 rows x 40 columns]

Iris Setosa Statistics:
             Id  SepalLengthCm  SepalWidthCm  PetalLengthCm  PetalWidthCm
count  50.00000       50.00000     50.000000      50.000000      50.00000
mean   25.50000        5.00600      3.418000       1.464000       0.24400
std    14.57738        0.35249      0.381024       0.173511       0.10721
min     1.00000        4.30000      2.300000       1.000000       0.10000
25%    13.25000        4.80000      3.125000       1.400000       0.20000
50%    25.50000        5.00000      3.400000       1.500000       0.20000
75%    37.75000        5.20000      3.675000       1.575000       0.30000
max    50.00000        5.80000      4.400000       1.900000       0.60000

Iris Versicolor Statistics:
             Id  SepalLengthCm  SepalWidthCm  PetalLengthCm  PetalWidthCm
count  50.00000      50.000000     50.000000      50.000000     50.000000
mean   75.50000       5.936000      2.770000       4.260000      1.326000
std    14.57738       0.516171      0.313798       0.469911      0.197753
```

```
min      51.00000      4.900000      2.000000      3.000000      1.000000
25%      63.25000      5.600000      2.525000      4.000000      1.200000
50%      75.50000      5.900000      2.800000      4.350000      1.300000
75%      87.75000      6.300000      3.000000      4.600000      1.500000
max     100.00000      7.000000      3.400000      5.100000      1.800000
```

Iris Virginica Statistics:

```
              Id  SepalLengthCm  SepalWidthCm  PetalLengthCm  PetalWidthCm
count   50.00000       50.00000      50.000000      50.000000      50.00000
mean   125.50000        6.58800       2.974000       5.552000       2.02600
```