ojt-q1

May 12, 2024

0.1 Q1. Data Visualization and Statistical Measures:

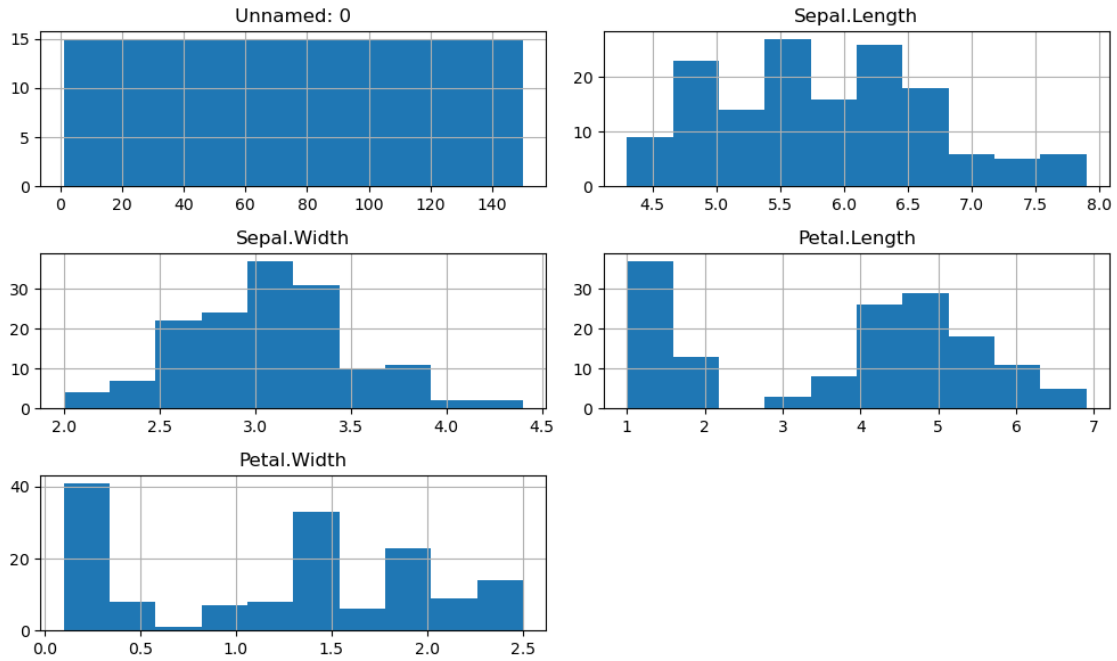
[1]:
```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from scipy import stats
```

[2]:
```
df = pd.read_csv(r"C:\Users\rajiu\Downloads\iris.csv")
```

[3]:
```
df
```

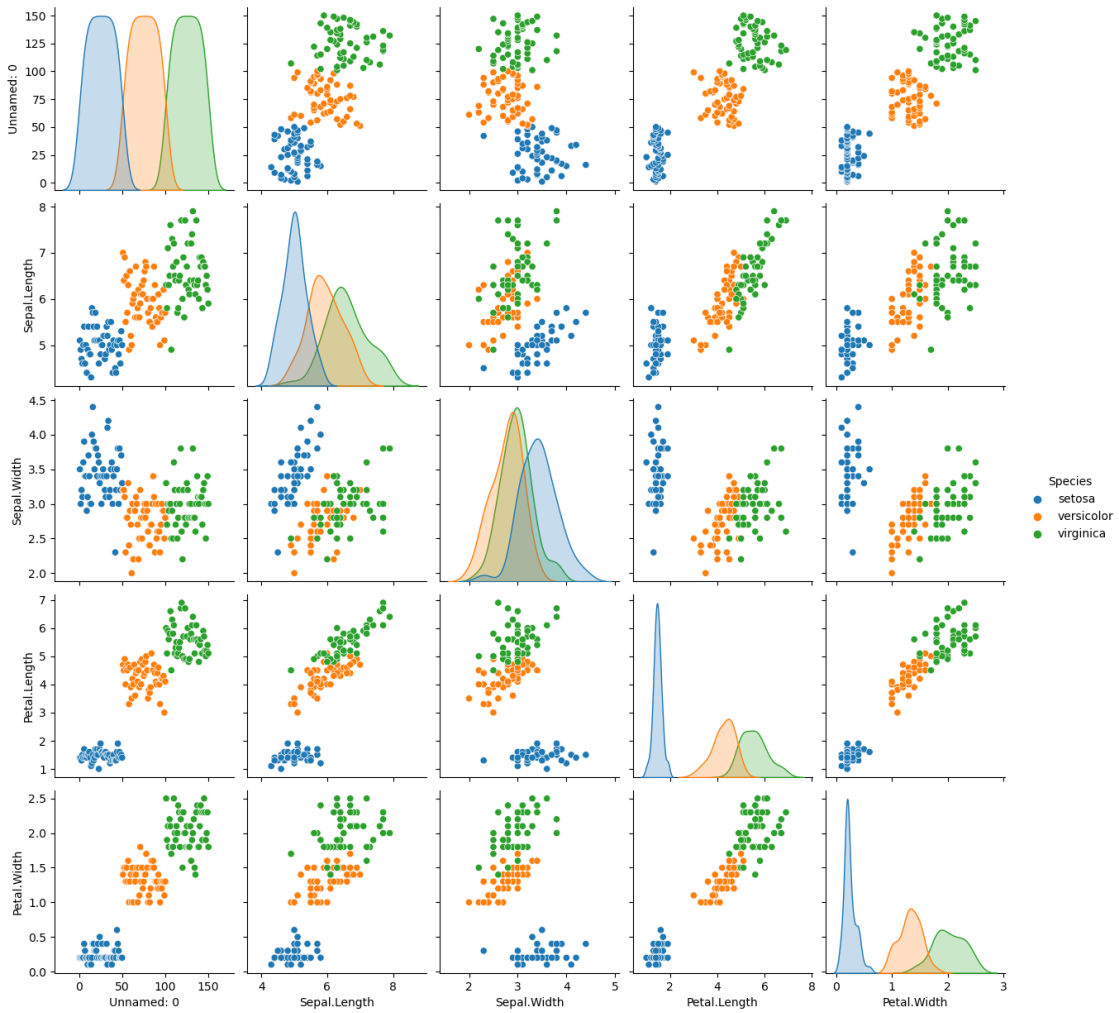
[3]:
```
     Unnamed: 0  Sepal.Length  Sepal.Width  Petal.Length  Petal.Width  \
0             1           5.1          3.5           1.4          0.2
1             2           4.9          3.0           1.4          0.2
2             3           4.7          3.2           1.3          0.2
3             4           4.6          3.1           1.5          0.2
4             5           5.0          3.6           1.4          0.2
..          ...           ...          ...           ...          ...
145         146           6.7          3.0           5.2          2.3
146         147           6.3          2.5           5.0          1.9
147         148           6.5          3.0           5.2          2.0
148         149           6.2          3.4           5.4          2.3
149         150           5.9          3.0           5.1          1.8

        Species
0        setosa
1        setosa
2        setosa
3        setosa
4        setosa
..          ...
145  virginica
146  virginica
147  virginica
148  virginica
149  virginica

[150 rows x 6 columns]
```

[4]:
```
df.hist(figsize=(10,6))
plt.tight_layout()
plt.show()
```

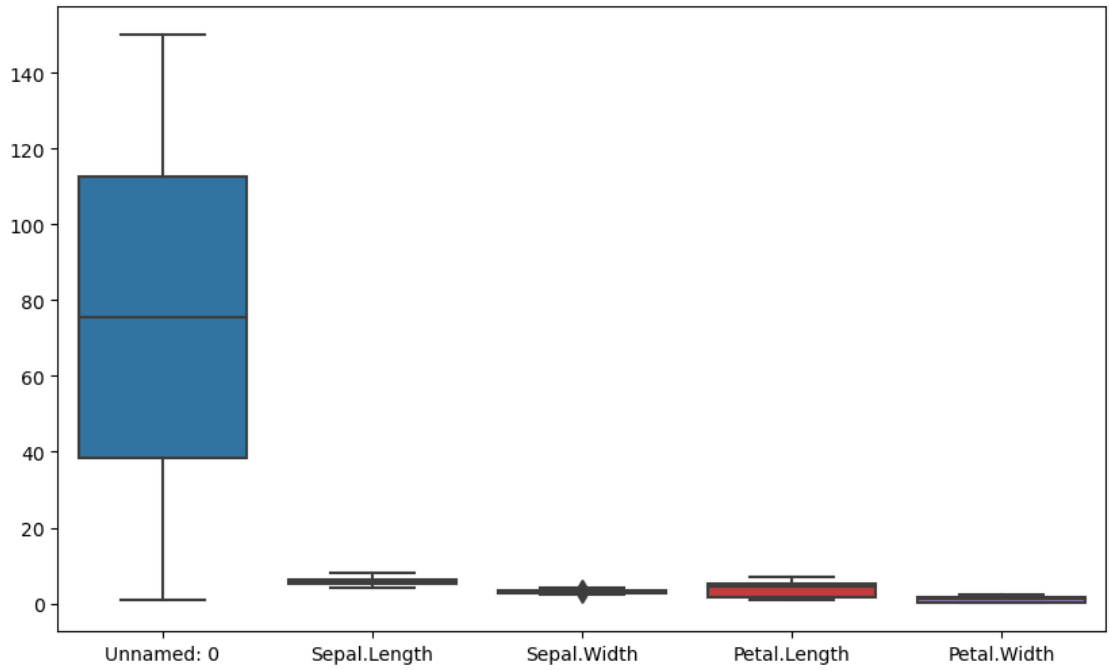


[6]:
```
sns.pairplot(df, hue='Species', height=2.5)
plt.show()
```

```
C:\Users\rajiu\anaconda3\Lib\site-packages\seaborn\axisgrid.py:118: UserWarning:
The figure layout has changed to tight
  self._figure.tight_layout(*args, **kwargs)
```



[8]:
```
plt.figure(figsize=(10,6))
sns.boxplot(df)
plt.show()
```



[9]:
```
df.describe()
```

[9]:

	Unnamed: 0	Sepal.Length	Sepal.Width	Petal.Length	Petal.Width
count	150.000000	150.000000	150.000000	150.000000	150.000000
mean	75.500000	5.843333	3.057333	3.758000	1.199333
std	43.445368	0.828066	0.435866	1.765298	0.762238
min	1.000000	4.300000	2.000000	1.000000	0.100000
25%	38.250000	5.100000	2.800000	1.600000	0.300000
50%	75.500000	5.800000	3.000000	4.350000	1.300000
75%	112.750000	6.400000	3.300000	5.100000	1.800000
max	150.000000	7.900000	4.400000	6.900000	2.500000