expt10

April 26, 2024

[ ]:
```
#exp_10
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#Roll No: A-43
```

[1]:
```
import seaborn as sns
iris = sns.load_dataset("iris")
```

[2]:
```
iris
```

[2]:
```
     sepal_length  sepal_width  petal_length  petal_width    species
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

[150 rows x 5 columns]
```

[3]:
```
iris.info
```

[3]:
```
<bound method DataFrame.info of      sepal_length  sepal_width  petal_length
petal_width    species
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

[150 rows x 5 columns]>
```

[4]:
```
iris.describe()
```

[4]:
```
       sepal_length  sepal_width  petal_length  petal_width
count    150.000000   150.000000    150.000000   150.000000
mean       5.843333     3.057333      3.758000     1.199333
std        0.828066     0.435866      1.765298     0.762238
min        4.300000     2.000000      1.000000     0.100000
25%        5.100000     2.800000      1.600000     0.300000
50%        5.800000     3.000000      4.350000     1.300000
75%        6.400000     3.300000      5.100000     1.800000
max        7.900000     4.400000      6.900000     2.500000
```

[5]:
```
type(iris.sepal_length)
```

[5]:
```
pandas.core.series.Series
```

[6]:
```
iris.sepal_length.dtype
```

[6]:
```
dtype('float64')
```

[7]:
```
iris.sepal_width.dtype
```

[7]:
```
dtype('float64')
```

[8]:
```
iris.petal_length.dtype
```

[8]:
```
dtype('float64')
```

[9]:
```
iris.petal_width.dtype
```

[9]:
```
dtype('float64')
```

[10]:
```
iris.species.dtype
```

[10]:
```
dtype('O')
```

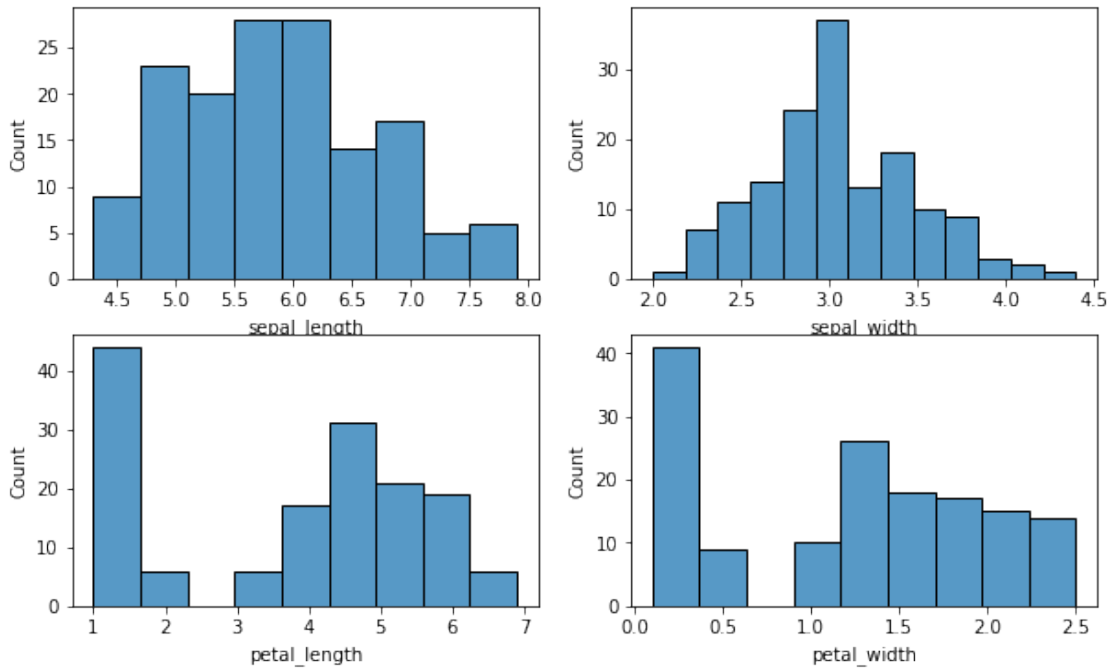
[11]:
```
iris.species.dtype
```

[11]:
```
dtype('O')
```

[13]:
```
import matplotlib.pyplot as plt
fig,axes = plt.subplots(2,2,figsize=(10,6))
```

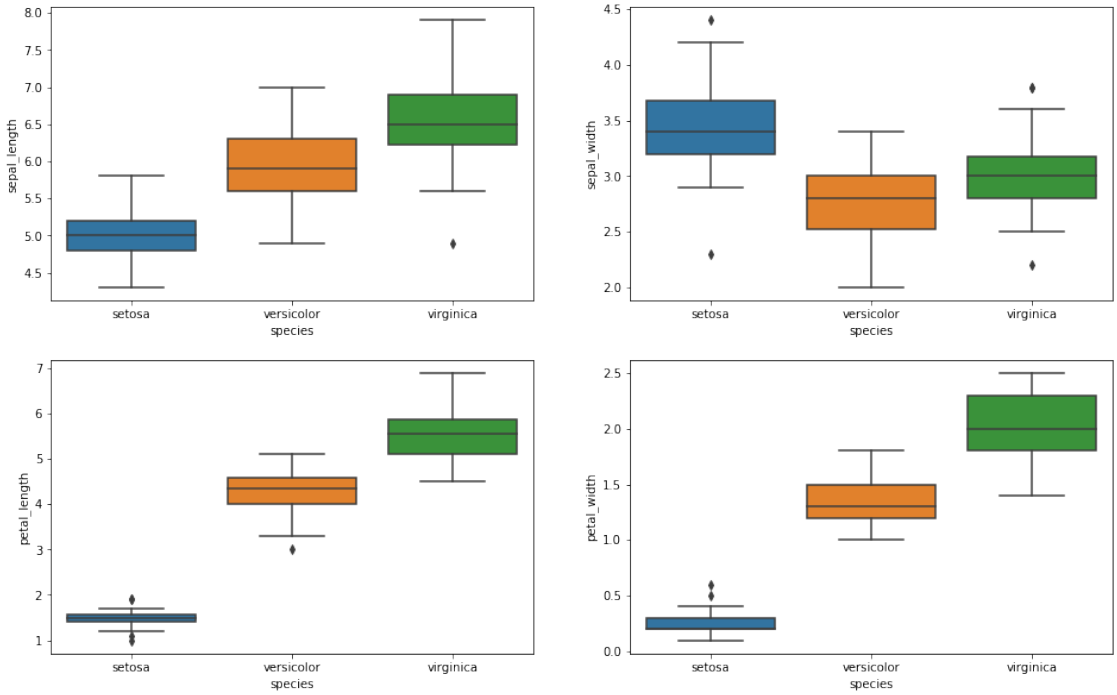
```
sns.histplot(iris["sepal_length"],ax=axes[0,0])
sns.histplot(iris["sepal_width"],ax=axes[0,1])
sns.histplot(iris["petal_length"],ax=axes[1,0])
sns.histplot(iris["petal_width"],ax=axes[1,1])
```

[13]: <matplotlib.axes._subplots.AxesSubplot at 0x7ffb39086090>



[14]:
```
#For boxplot
fig,axes = plt.subplots(2,2,figsize=(16,10))
sns.boxplot(x="species",y="sepal_length",data=iris,ax=axes[0,0])
sns.boxplot(x="species",y="sepal_width",data=iris,ax=axes[0,1])
sns.boxplot(x="species",y="petal_length",data=iris,ax=axes[1,0])
sns.boxplot(x="species",y="petal_width",data=iris,ax=axes[1,1])
```

[14]: <matplotlib.axes._subplots.AxesSubplot at 0x7ffb38e8b690>


sepal_length
sepal_width
petal_length
petal_width
setosa
versicolor
virginica
species

[ ]: