Practical No:10

Title: Data Visualization III

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
data = pd.read_csv('https://gist.githubusercontent.com/curran/a08a1080b88344b0c8a7/raw/0e7a9b0a5d22642a06d3d5b9bcbad9890c8ee534/iris.csv')
data
```

✓ 6.4s

	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 × 5 columns

```
data.describe(include = 'object')
```

✓ 0.0s

	species
count	150
unique	3
top	setosa
freq	50

```
data.head()
```

✓ 0.0s

	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

```
data.isnull().sum()
```

[4] ✓ 0.0s

```
sepal_length    0
sepal_width     0
petal_length    0
petal_width     0
species         0
dtype: int64
```

```
print("\n\nThe features in the dataset are as follows : ")
print("1. Sepal length : ", data['sepal_length'].dtype)
print("2. Sepal width : ", data['sepal_width'].dtype)
print("3. Petal length : ", data['petal_length'].dtype)
print("4. Petal width : ", data['petal_width'].dtype)
print("5. Species : ", data['species'].dtype)
```

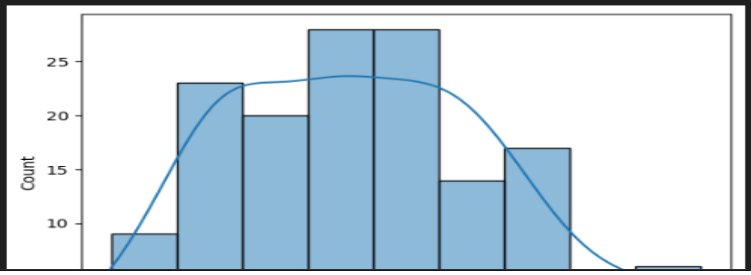
[5] ✓ 0.0s

```
The features in the dataset are as follows :
1. Sepal length :  float64
2. Sepal width :  float64
3. Petal length :  float64
4. Petal width :  float64
5. Species :  object
```

```
sns.histplot(x = data['sepal_length'], kde=True)
```

[6] ✓ 0.6s

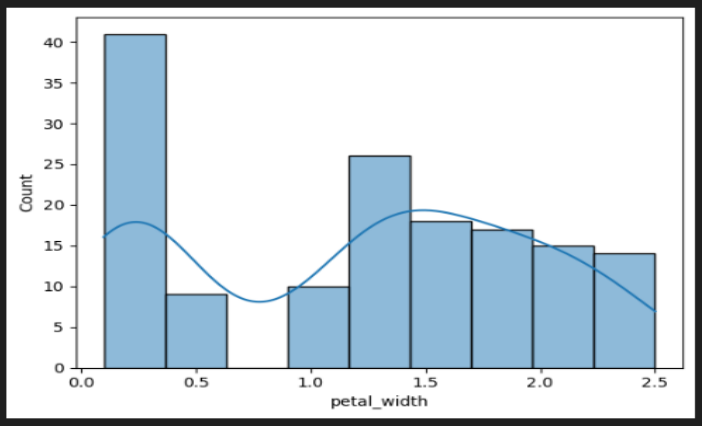
```
<Axes: xlabel='sepal_length', ylabel='Count'>
```



```
sns.histplot(x = data['petal_width'], kde=True)
```

[7] ✓ 0.5s

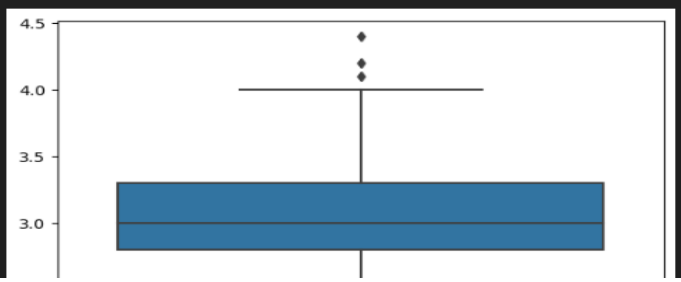
```
<Axes: xlabel='petal_width', ylabel='Count'>
```




```
sns.boxplot(data['sepal_width'])
```

[8] ✓ 0.2s

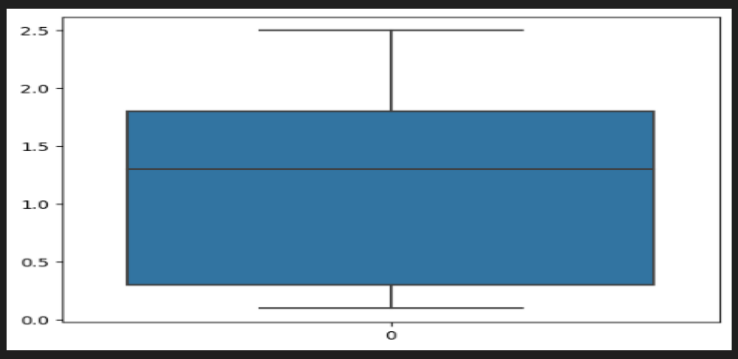
```
<Axes: >
```




```
sns.boxplot(data['petal_width'])
```

[9] ✓ 0.2s

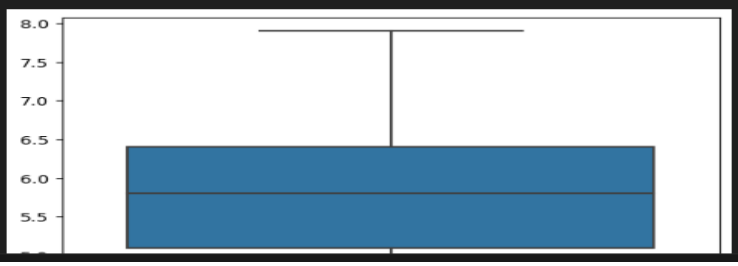
```
<Axes: >
```




```
sns.boxplot(data['sepal_length'])
```

[10] ✓ 0.3s

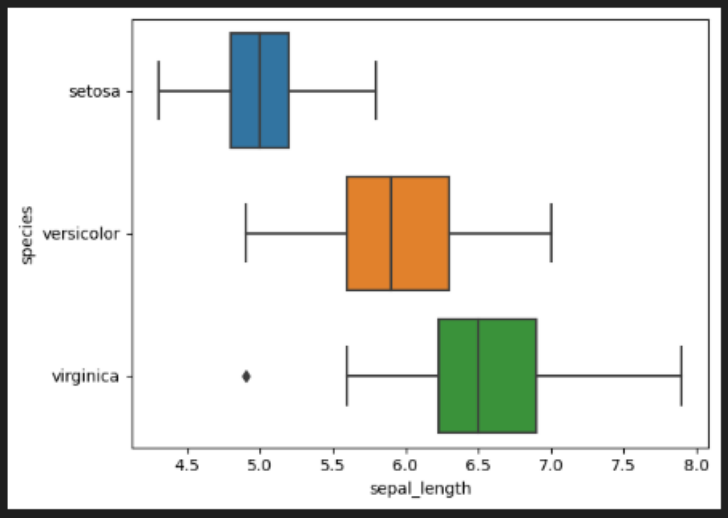
```
<Axes: >
```



```
sns.boxplot(x='sepal_length',y='species',data=data)
```

✓ 0.4s

```
<Axes: xlabel='sepal_length', ylabel='species'>
```




```
sns.boxplot(x='petal_length',y='species',data=data)
```

✓ 0.3s

```
<Axes: xlabel='petal_length', ylabel='species'>
```