```
import seaborn as sns
import pandas as pd
import matplotlib.pyplot as plt
```

```
df= sns.load_dataset('iris')
```

```
df.head
```

```
<bound method NDFrame.head 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
```

[7]:
```
numeric_df = iris.select_dtypes(include=['float64', 'int64'])
```

[9]:
```
numeric_df.head(5)
```

[9]:

	sepal_length	sepal_width	petal_length	petal_width
0	5.1	3.5	1.4	0.2
1	4.9	3.0	1.4	0.2
2	4.7	3.2	1.3	0.2
3	4.6	3.1	1.5	0.2
4	5.0	3.6	1.4	0.2

[10]:
```
# Create correlation matrix
corr_matrix = numeric_df.corr()
```

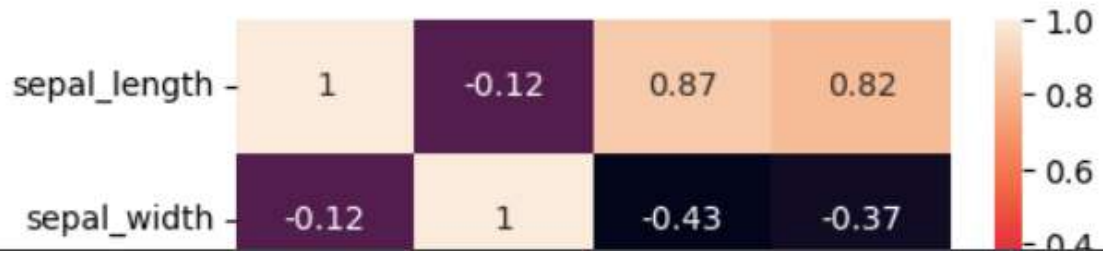
•[12]:
```
#show this matrix all colomns howmany correlated to each other
corr_matrix
```

[12]:

	sepal_length	sepal_width	petal_length	petal_width
sepal_length	1.000000	-0.117570	0.871754	0.817941
sepal_width	-0.117570	1.000000	-0.428440	-0.366126
petal_length	0.871754	-0.428440	1.000000	0.962865
petal_width	0.817941	-0.366126	0.962865	1.000000

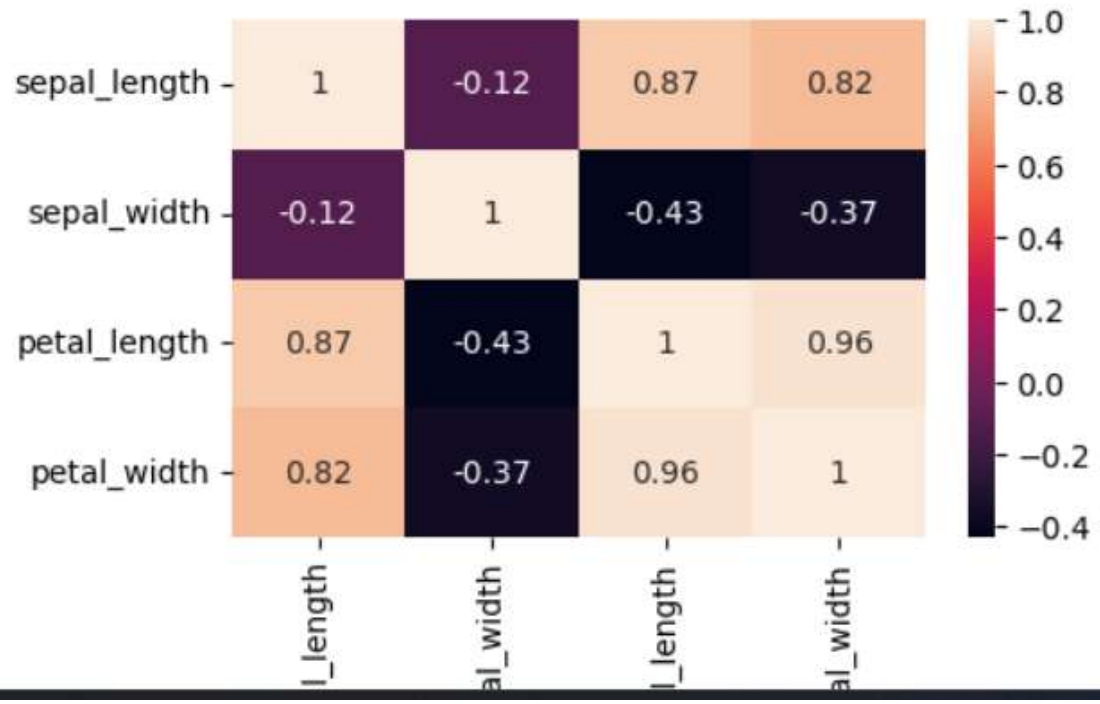
[19]:
```
# Plot correlation heatmap
plt.figure(figsize=(5,3))
sns.heatmap(corr_matrix, annot=True)
```

[19]:
```
<Axes: >
```



[19]:
```
# Plot correlation heatmap
plt.figure(figsize=(5,3))
sns.heatmap(corr_matrix, annot=True)
```

[19]: <Axes: >



[ ]:
```
#0.96 Strong +ve
#0.87   Moderate +ve
#0.43   Weak -ve  hai
# here Petal length and petal width show very high positive correlation 0.96
#means jab petal length increase hota hai, petal width bhi increase hota hai.

#Sepal length is moderately correlated with petal length and width.

#Sepal width has low or negative correlation with other features.

# petal measurements are more strongly related and useful for classification of Iris data
```

[ ]: