

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import plotly.express as px
from sklearn.datasets import load_iris
import warnings
warnings.filterwarnings("ignore")
```

```
data = load_iris()
```

```
df = pd.DataFrame()
df[data['feature_names']] = data['data']
df['label'] = data['target']
```

```
df.head()
```

	sepal length (cm)	sepal width (cm)	petal length (cm)	petal width (cm)
0	5.1	3.5	1.4	
1	4.9	3.0	1.4	
2	4.7	3.2	1.3	
3	4.6	3.1	1.5	
4	5.0	3.6	1.4	

	label
0	0
1	0
2	0
3	0
4	0

```
df.shape
```

```
(150, 5)
```

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
```

```
RangeIndex: 150 entries, 0 to 149
```

```
Data columns (total 5 columns):
```

#	Column	Non-Null Count	Dtype
0	sepal length (cm)	150 non-null	float64
1	sepal width (cm)	150 non-null	float64
2	petal length (cm)	150 non-null	float64

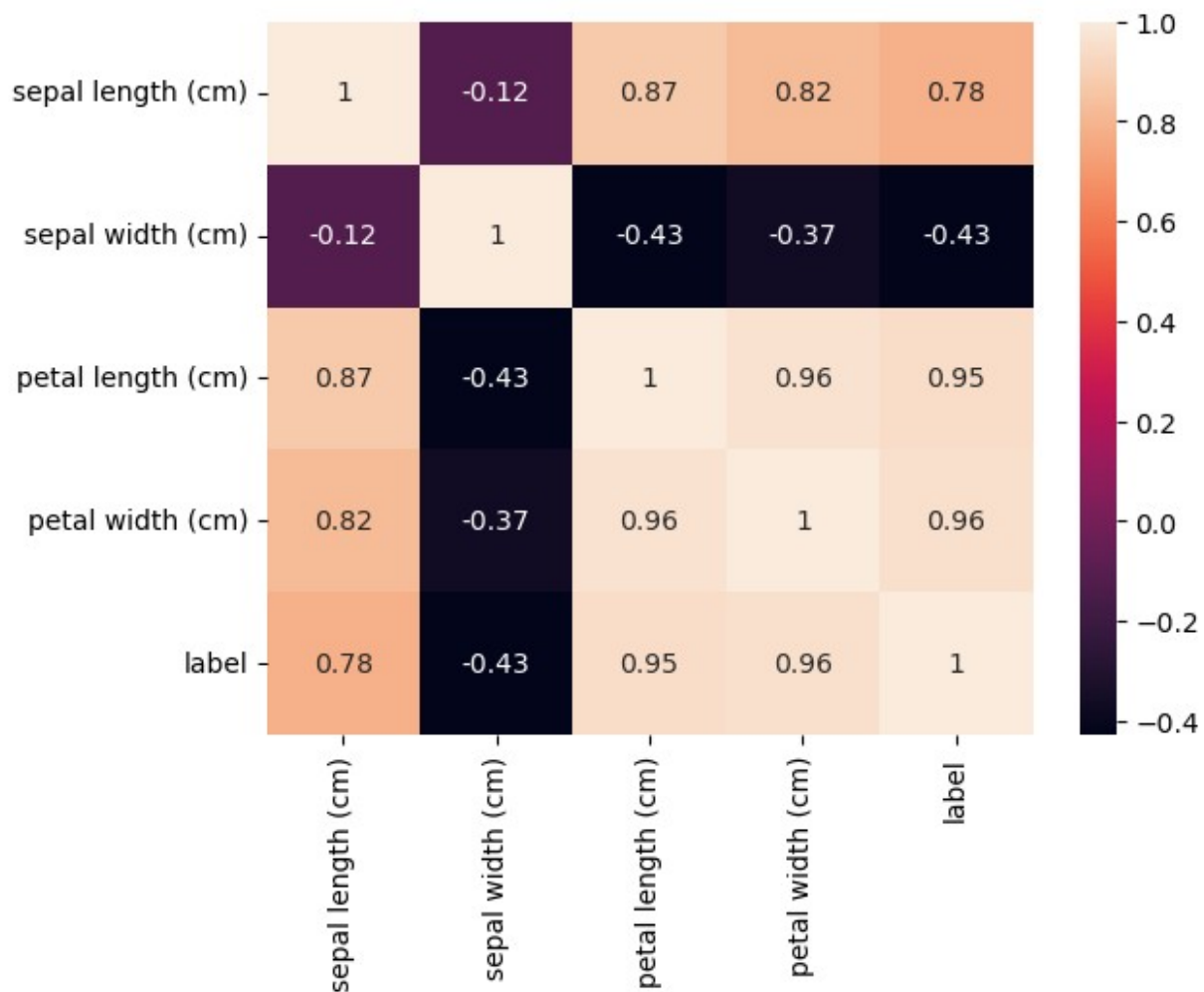
```
3    petal width (cm)    150 non-null    float64
4    label              150 non-null    int32
dtypes: float64(4), int32(1)
memory usage: 5.4 KB
```

```
df.describe()
```

	sepal length (cm)	sepal width (cm)	petal length (cm)	\
count	150.000000	150.000000	150.000000	
mean	5.843333	3.057333	3.758000	
std	0.828066	0.435866	1.765298	
min	4.300000	2.000000	1.000000	
25%	5.100000	2.800000	1.600000	
50%	5.800000	3.000000	4.350000	
75%	6.400000	3.300000	5.100000	
max	7.900000	4.400000	6.900000	

	petal width (cm)	label
count	150.000000	150.000000
mean	1.199333	1.000000
std	0.762238	0.819232
min	0.100000	0.000000
25%	0.300000	0.000000
50%	1.300000	1.000000
75%	1.800000	2.000000
max	2.500000	2.000000

```
sns.heatmap(df.corr(), annot=True)
plt.show()
```



```
sns.histplot(df["sepal length (cm)"], kde=True)  
plt.show()
```

