In [1]:
```
import pandas as pd
from sklearn.datasets import load_iris

# Load the Iris dataset
iris = load_iris()
iris_df = pd.DataFrame(data=iris.data, columns=iris.feature_names)
iris_df['target'] = iris.target
iris_df['target_names'] = iris_df['target'].apply(lambda x: iris.target_names[x])

# Display the first few rows of the dataset
iris_df.head()
```

Out[1]:

	sepal length (cm)	sepal width (cm)	petal length (cm)	petal width (cm)	target	target_names
0	5.1	3.5	1.4	0.2	0	setosa
1	4.9	3.0	1.4	0.2	0	setosa
2	4.7	3.2	1.3	0.2	0	setosa
3	4.6	3.1	1.5	0.2	0	setosa
4	5.0	3.6	1.4	0.2	0	setosa

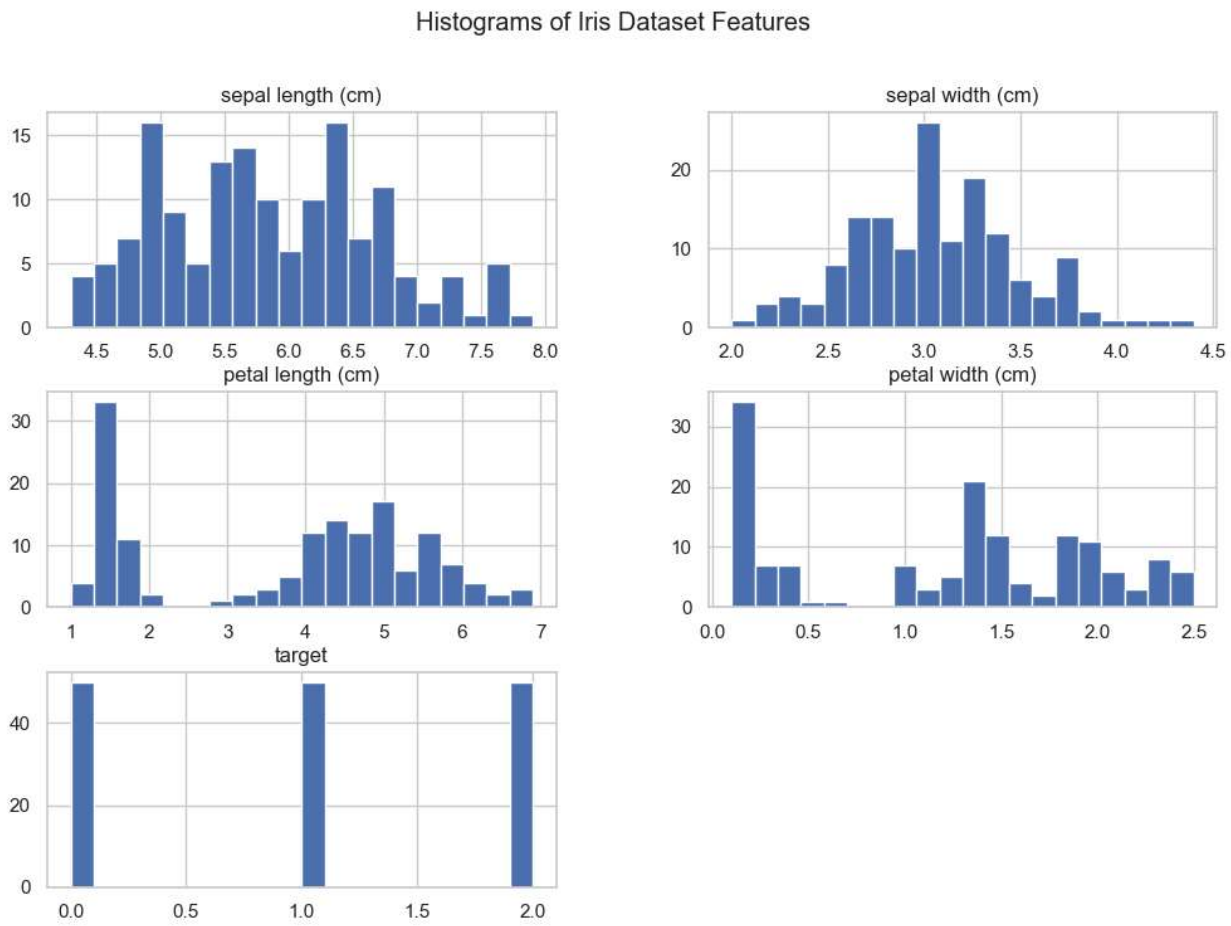
In [2]:
```
# Get a statistical summary of the dataset
iris_df.describe()
```

Out[2]:

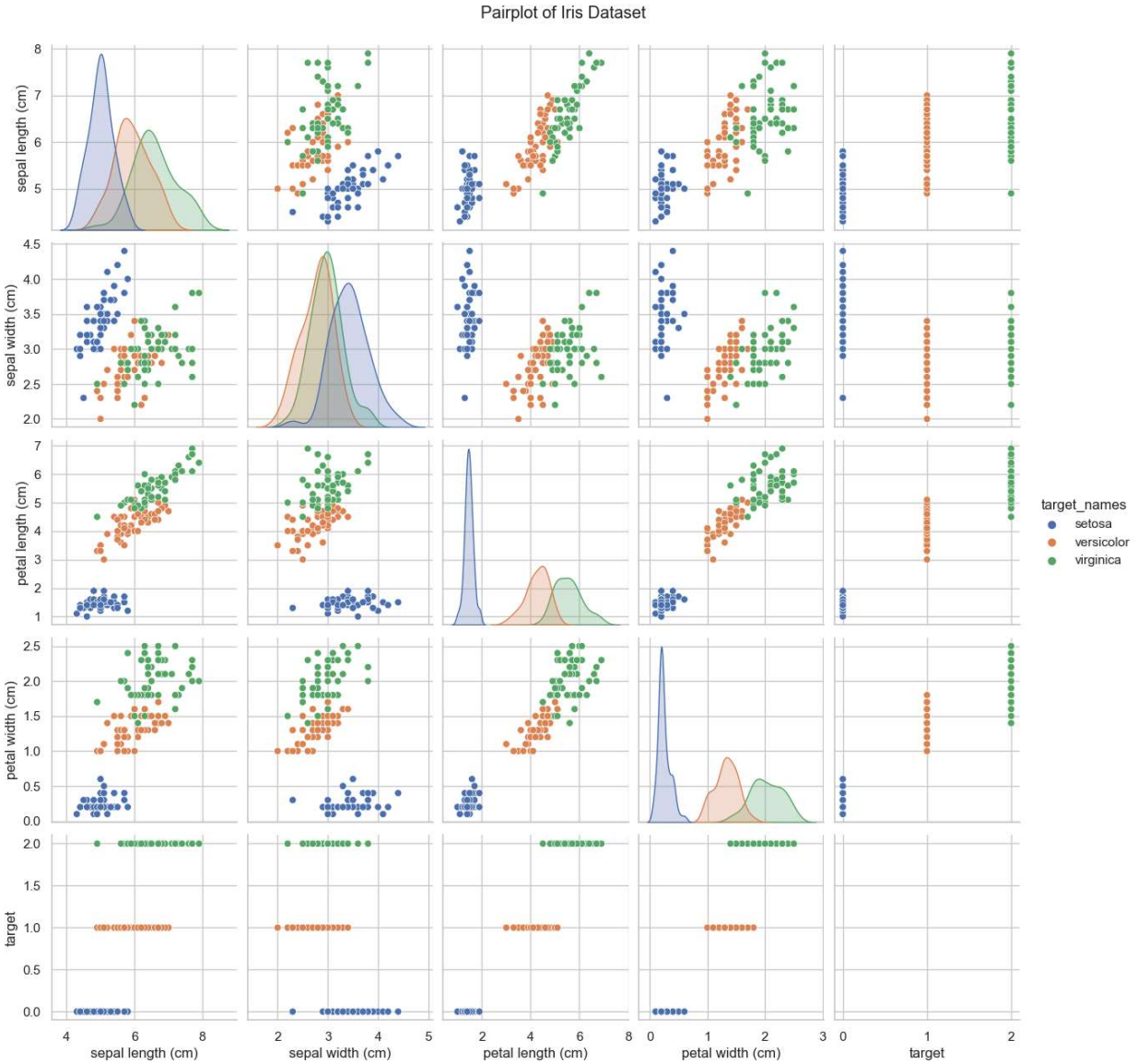
	sepal length (cm)	sepal width (cm)	petal length (cm)	petal width (cm)	target
count	150.000000	150.000000	150.000000	150.000000	150.000000
mean	5.843333	3.057333	3.758000	1.199333	1.000000
std	0.828066	0.435866	1.765298	0.762238	0.819232
min	4.300000	2.000000	1.000000	0.100000	0.000000
25%	5.100000	2.800000	1.600000	0.300000	0.000000
50%	5.800000	3.000000	4.350000	1.300000	1.000000
75%	6.400000	3.300000	5.100000	1.800000	2.000000
max	7.900000	4.400000	6.900000	2.500000	2.000000

In [3]:
```
import matplotlib.pyplot as plt
import seaborn as sns

# Set the aesthetic style of the plots
sns.set(style="whitegrid")

# Create histograms
iris_df.hist(figsize=(12, 8), bins=20)
plt.suptitle("Histograms of Iris Dataset Features")
plt.show()

# Create a pairplot
sns.pairplot(iris_df, hue="target_names", diag_kind="kde")
```

```
plt.suptitle("Pairplot of Iris Dataset", y=1.02)
plt.show()
```

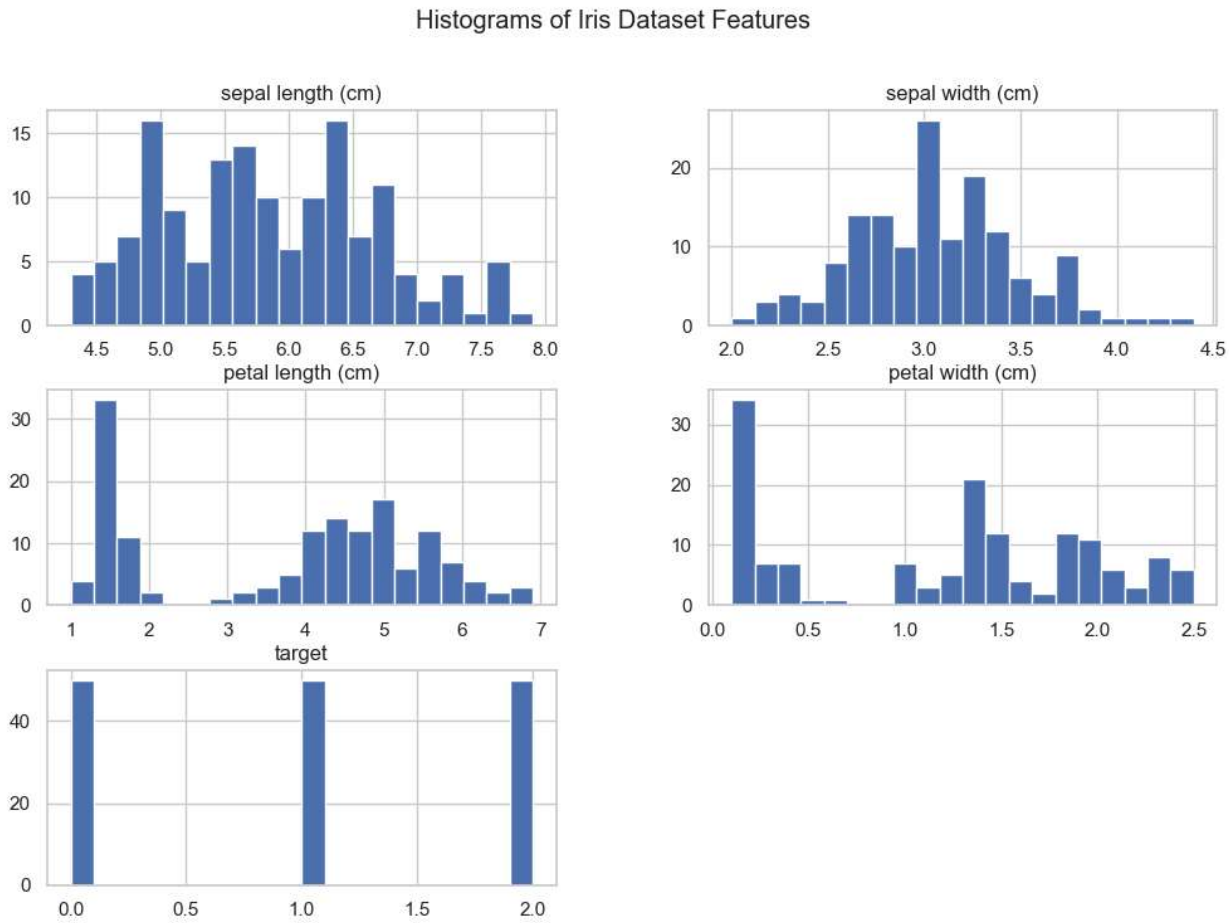



```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\axisgrid.py:118: UserWarning: The
figure layout has changed to tight
  self._figure.tight_layout(*args, **kwargs)
```



In [4]:

```
# Create histograms
iris_df.hist(figsize=(12, 8), bins=20)
plt.suptitle("Histograms of Iris Dataset Features")
plt.show()

# Create a pairplot
sns.pairplot(iris_df.drop(columns=["target_names"]), hue="target", diag_kind="kde", ma
plt.suptitle("Pairplot of Iris Dataset", y=1.02)
plt.show()
```




```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\axisgrid.py:118: UserWarning: The
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  self._figure.tight_layout(*args, **kwargs)
```
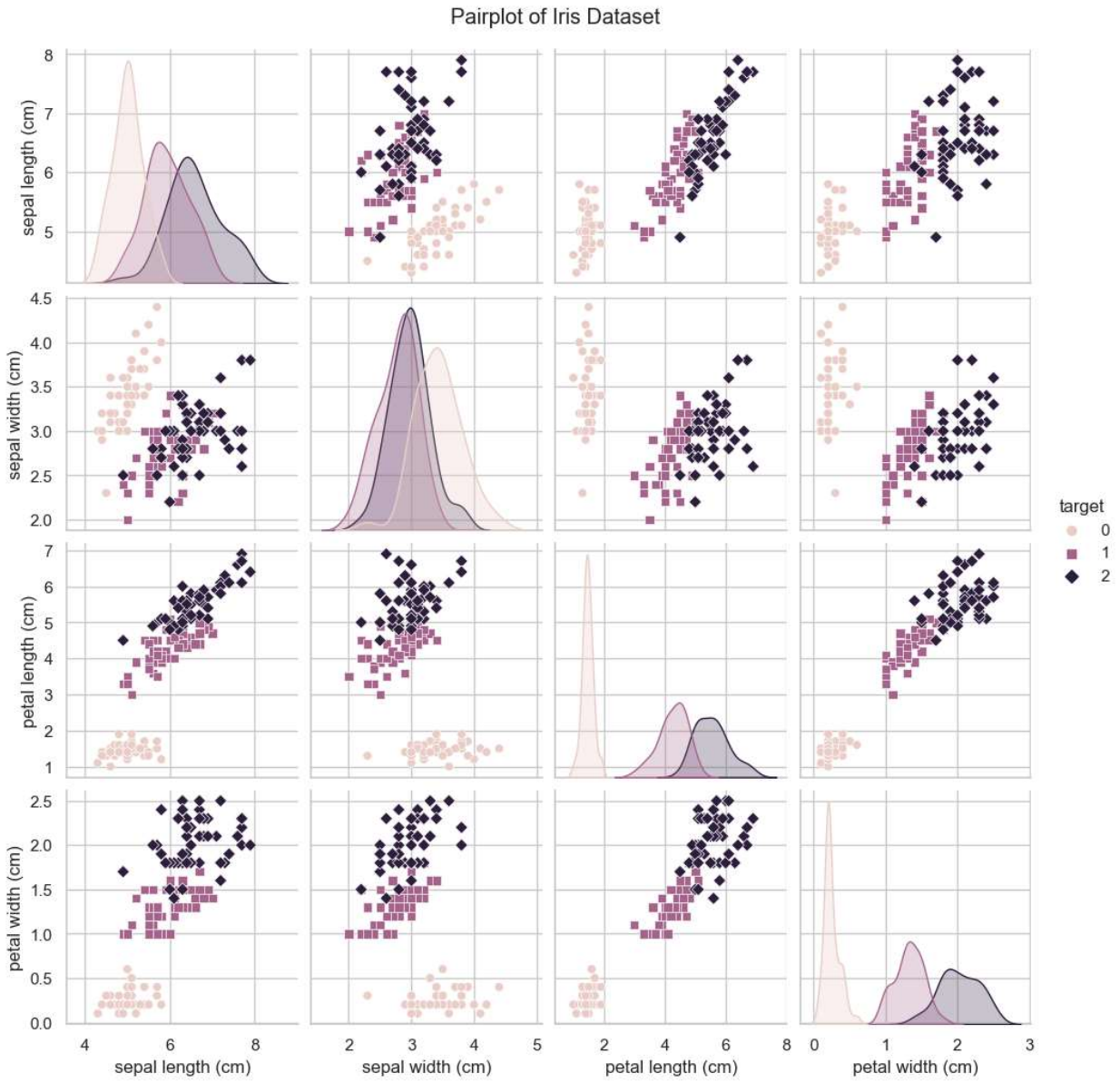
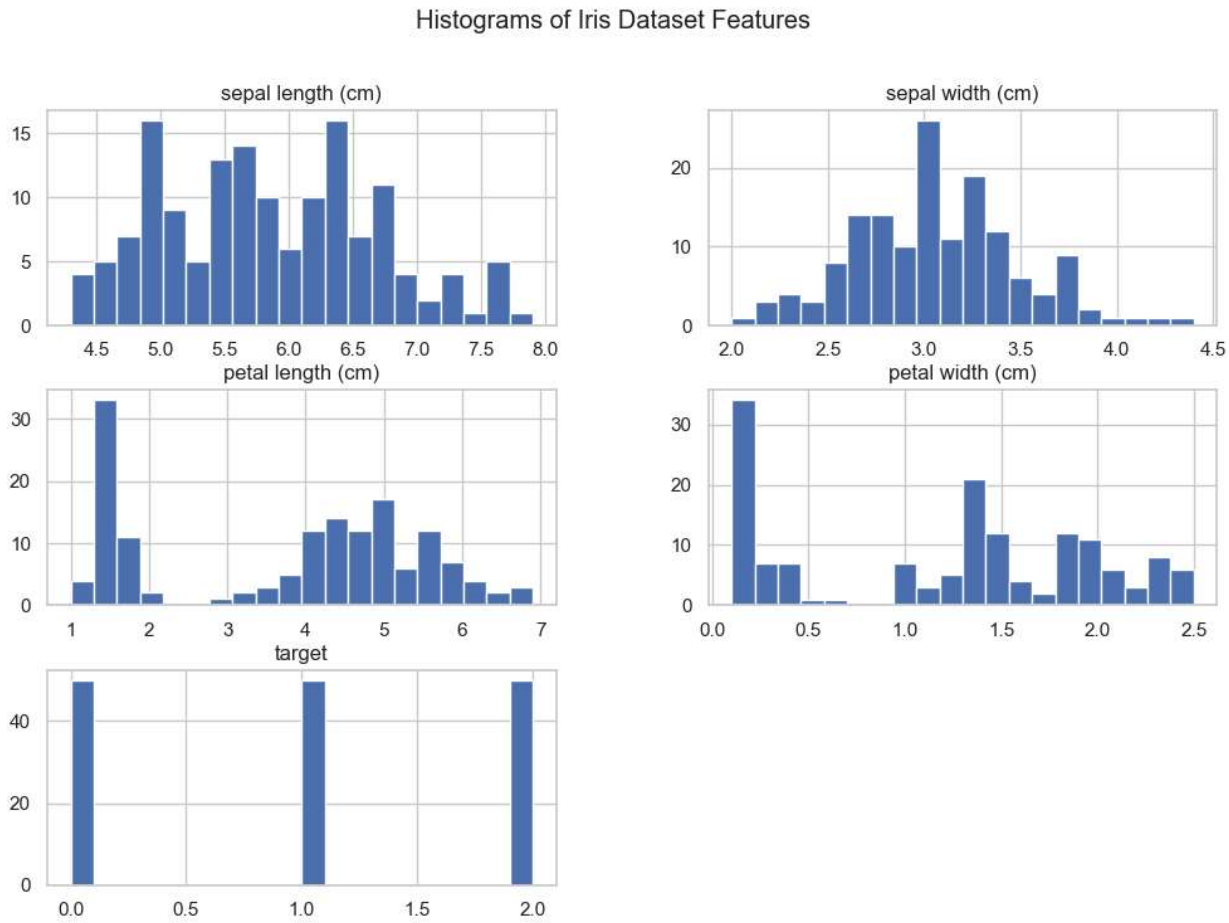
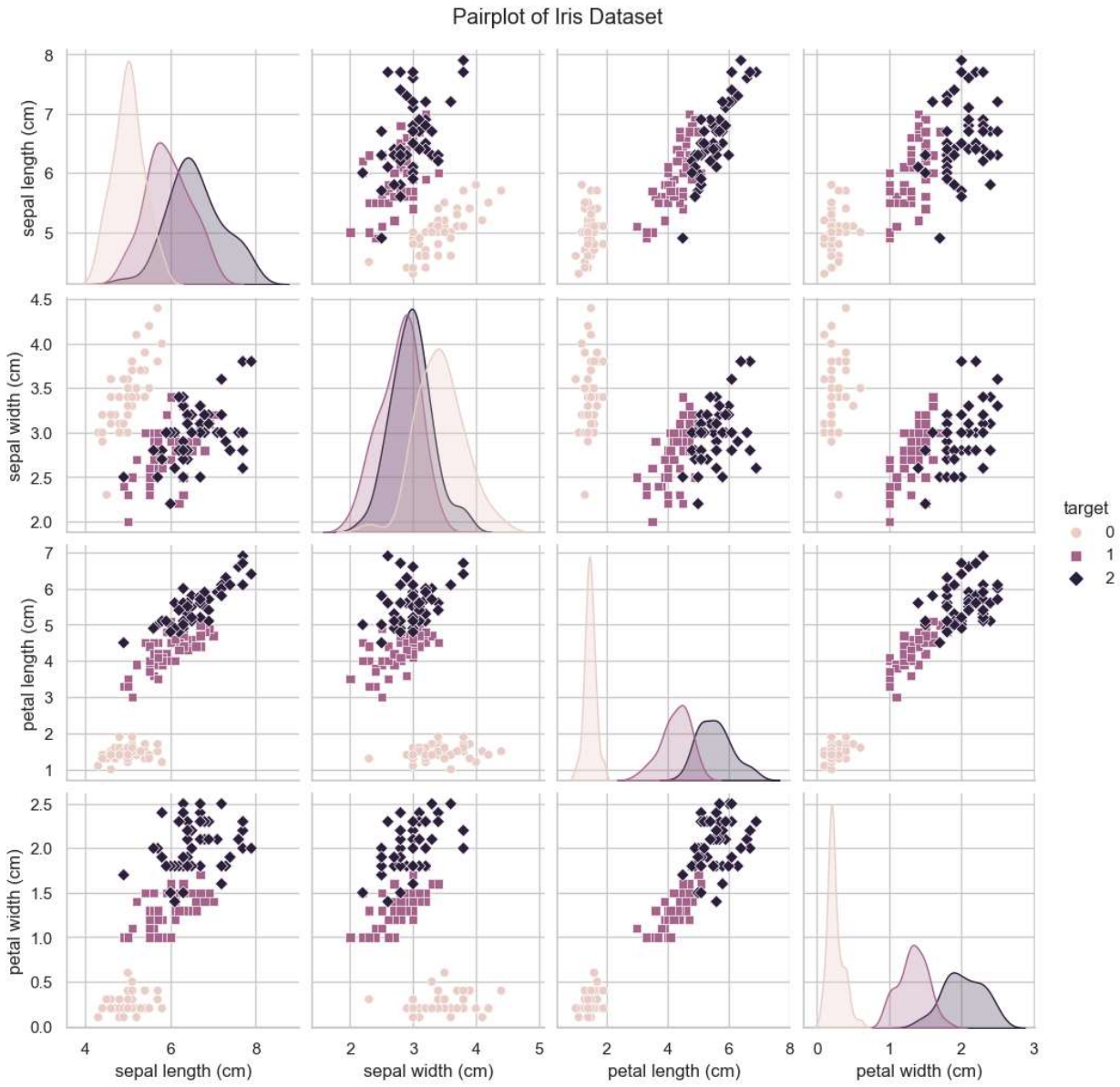



In [5]:

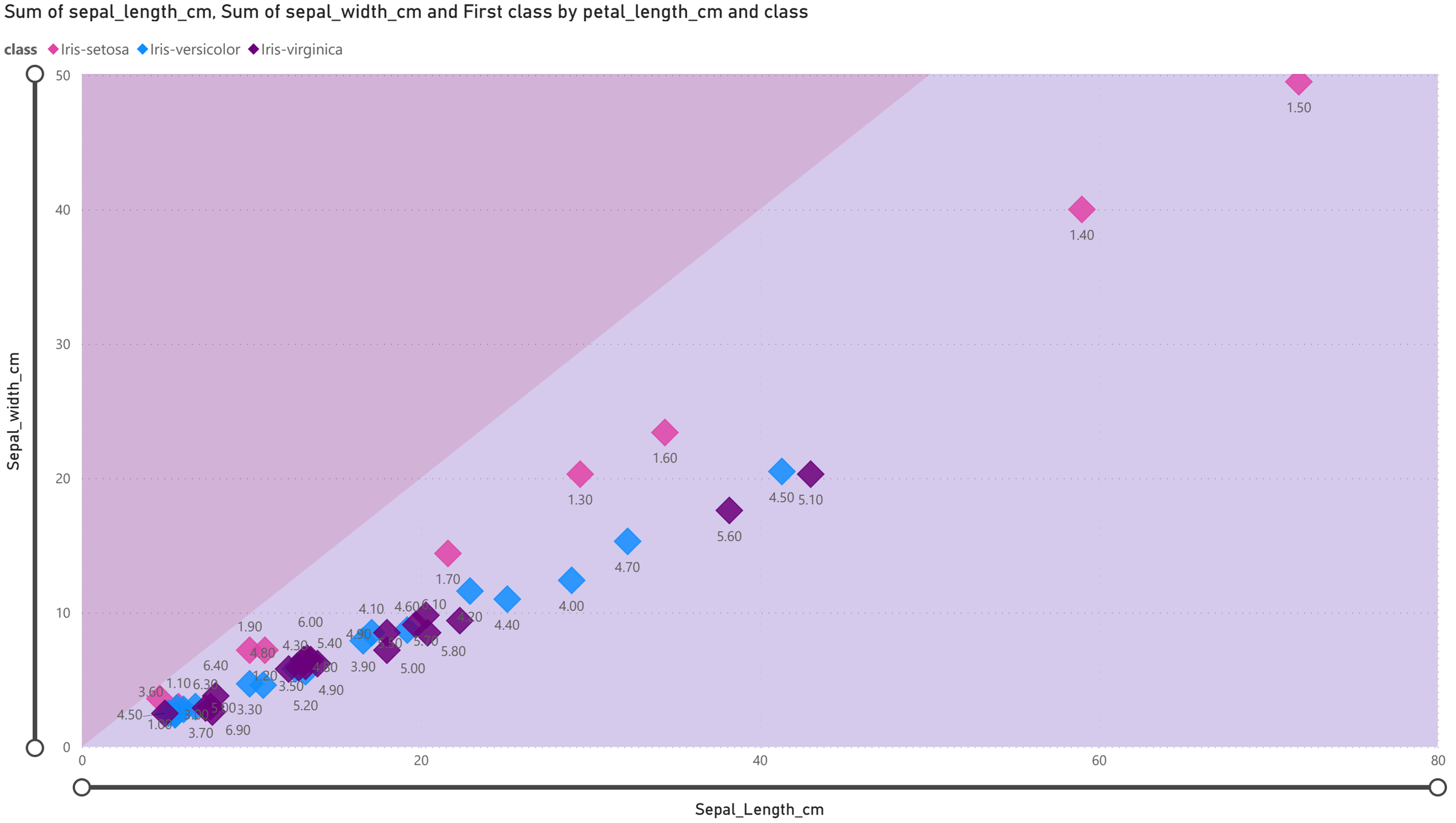
```
import matplotlib.pyplot as plt
import seaborn as sns

# Set the aesthetic style of the plots
sns.set(style="whitegrid")

# Create histograms
iris_df.hist(figsize=(12, 8), bins=20)
plt.suptitle("Histograms of Iris Dataset Features")
plt.show()

# Create a pairplot
sns.pairplot(iris_df.drop(columns=["target_names"]), hue="target", diag_kind="kde", ma
plt.suptitle("Pairplot of Iris Dataset", y=1.02)
plt.show()
```




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


Pairplot of Iris Dataset
sepal length (cm)
sepal width (cm)
petal length (cm)
petal width (cm)
target
0
1
2

In [ ]:


Sum of sepal_length_cm, Sum of sepal_width_cm and First class by petal_length_cm and class
class
Iris-setosa
Iris-versicolor
Iris-virginica
Sepal_width_cm
Sepal_Length_cm
0
10
20
30
40
50
0
20
40
60
80
1.50
1.40
1.60
1.30
4.50
5.10
5.60
4.70
1.70
4.00
4.40
4.10
4.60
6.10
4.20
4.90
5.70
5.80
5.00
3.90
1.90
6.00
4.80
4.30
5.40
6.40
1.20
3.50
4.90
5.20
3.60
1.10
6.30
4.50
3.30
5.00
1.00
3.00
3.70
6.90