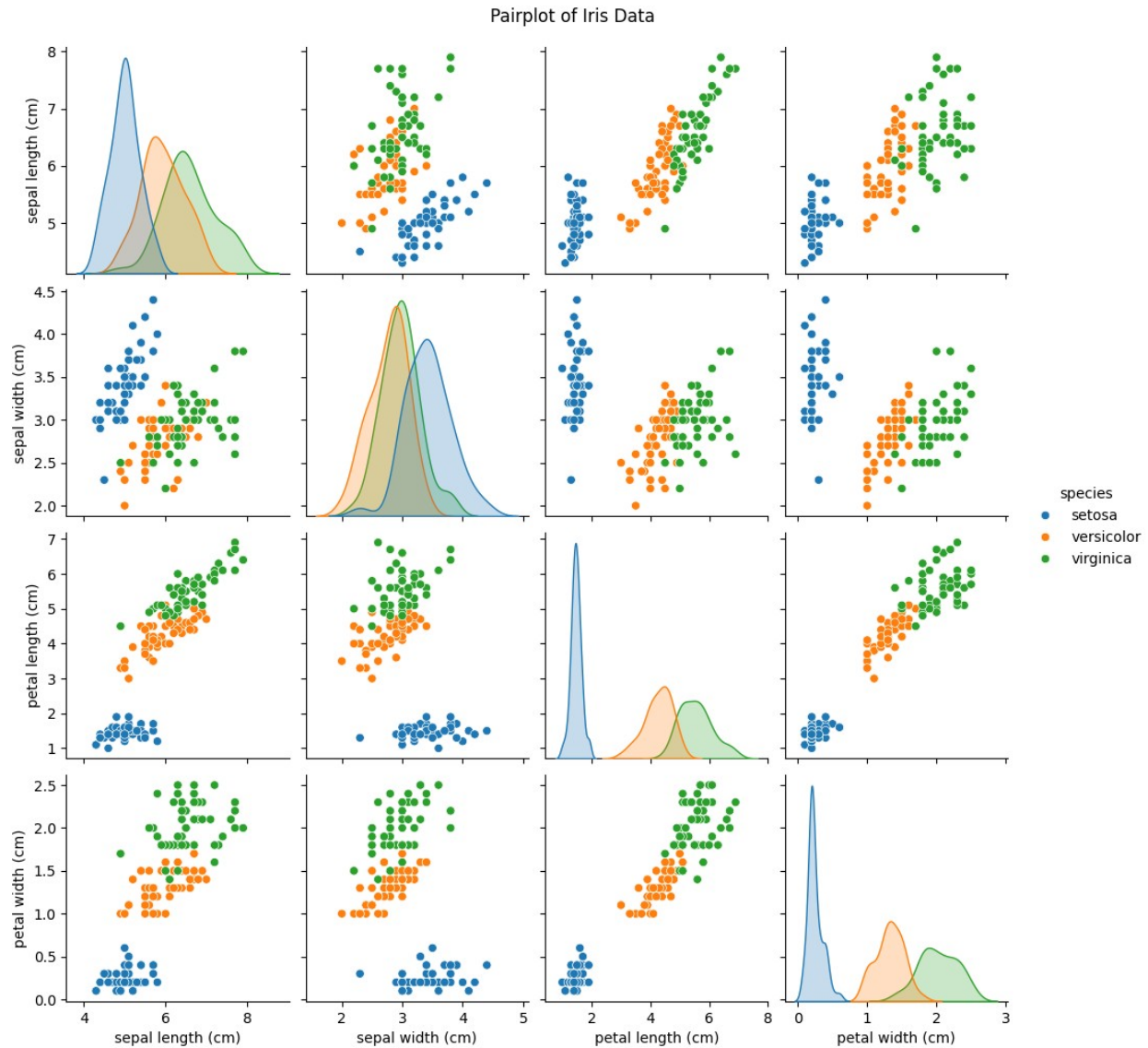


General Statistics Plot (Using Seaborn's Pairplot):

```
import seaborn as sns
import matplotlib.pyplot as plt
from sklearn.datasets import load_iris
import pandas as pd

# Load the Iris dataset
iris = load_iris()
df = pd.DataFrame(data=iris.data, columns=iris.feature_names)
df['species'] = iris.target_names[iris.target]

# Create a pairplot
sns.pairplot(df, hue='species')
plt.suptitle('Pairplot of Iris Data', y=1.02)
plt.show()
```



Pie Plot for Species Frequency:-

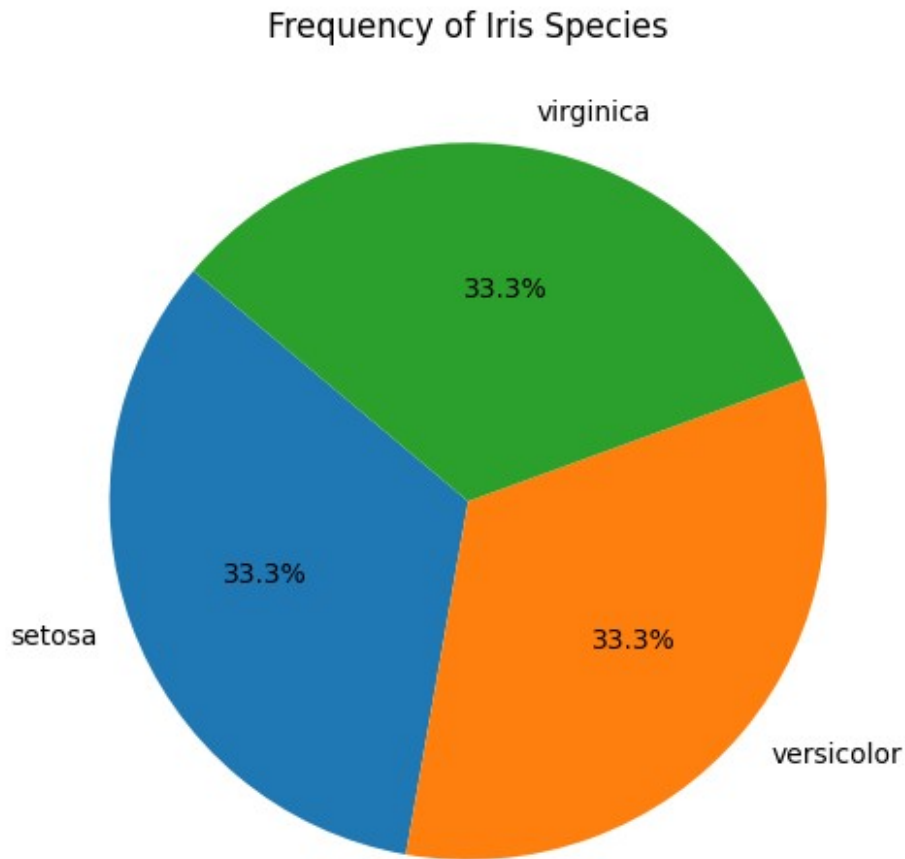
```
import pandas as pd
import matplotlib.pyplot as plt
from sklearn.datasets import load_iris

# Load the Iris dataset
iris = load_iris()
df = pd.DataFrame(data=iris.data, columns=iris.feature_names)
df['species'] = iris.target_names[iris.target]

# Calculate the frequency of each species
species_counts = df['species'].value_counts()

# Plot pie chart
plt.figure(figsize=(8, 6))
```

```
plt.pie(species_counts, labels=species_counts.index, autopct='%1.1f%%', startangle=140)
plt.title('Frequency of Iris Species')
plt.show()
```



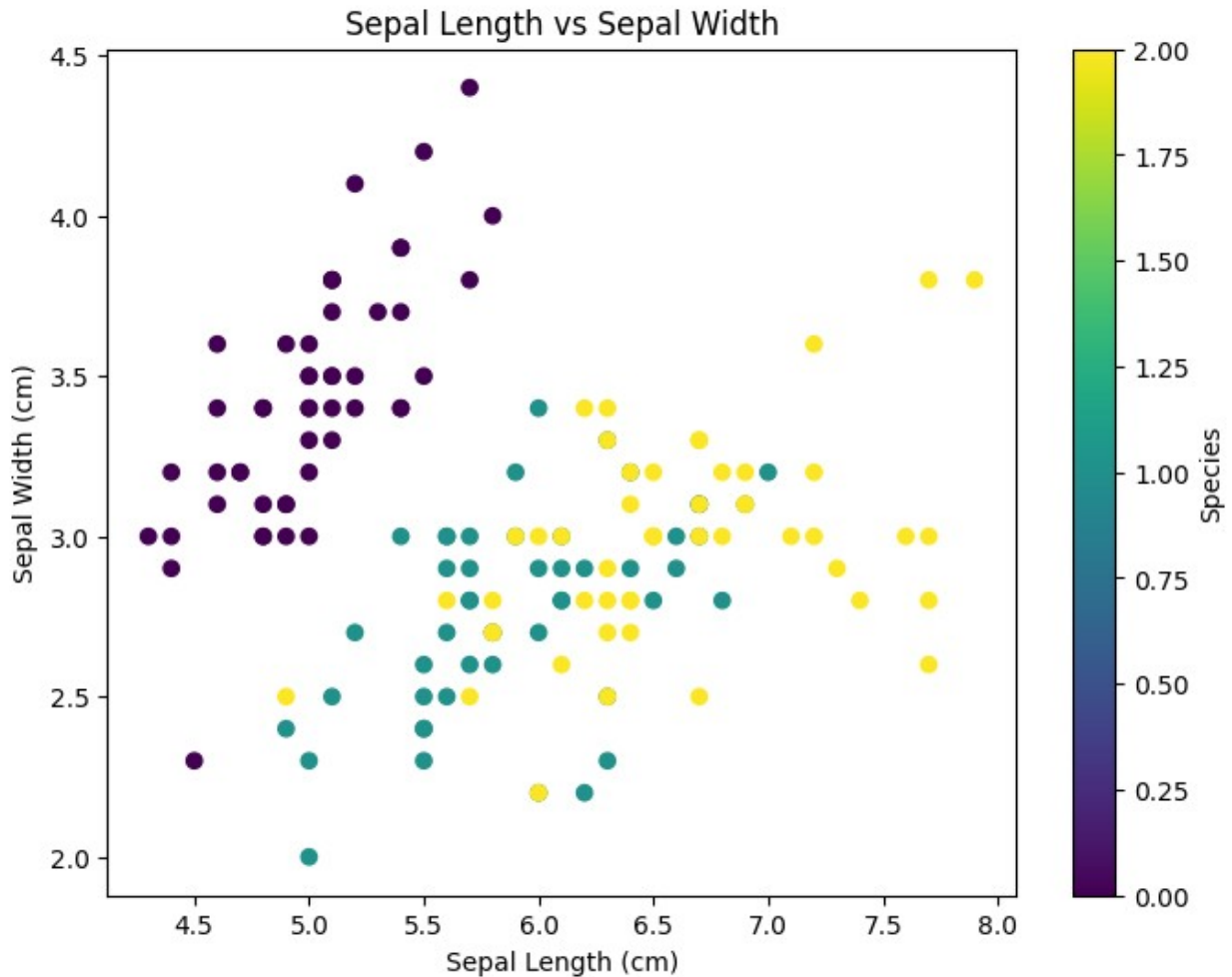
Relationship Between Sepal Length and Width:

```
import pandas as pd
import matplotlib.pyplot as plt
from sklearn.datasets import load_iris

# Load the Iris dataset
iris = load_iris()
df = pd.DataFrame(data=iris.data, columns=iris.feature_names)
df['species'] = iris.target_names[iris.target]

# Create a scatter plot
plt.figure(figsize=(8, 6))
plt.scatter(df['sepal length (cm)'], df['sepal width (cm)'],
           c=df['species'].astype('category').cat.codes, cmap='viridis')
```

```
plt.xlabel('Sepal Length (cm)')
plt.ylabel('Sepal Width (cm)')
plt.title('Sepal Length vs Sepal Width')
plt.colorbar(label='Species')
plt.show()
```



Distribution of Sepal and Petal Features:-

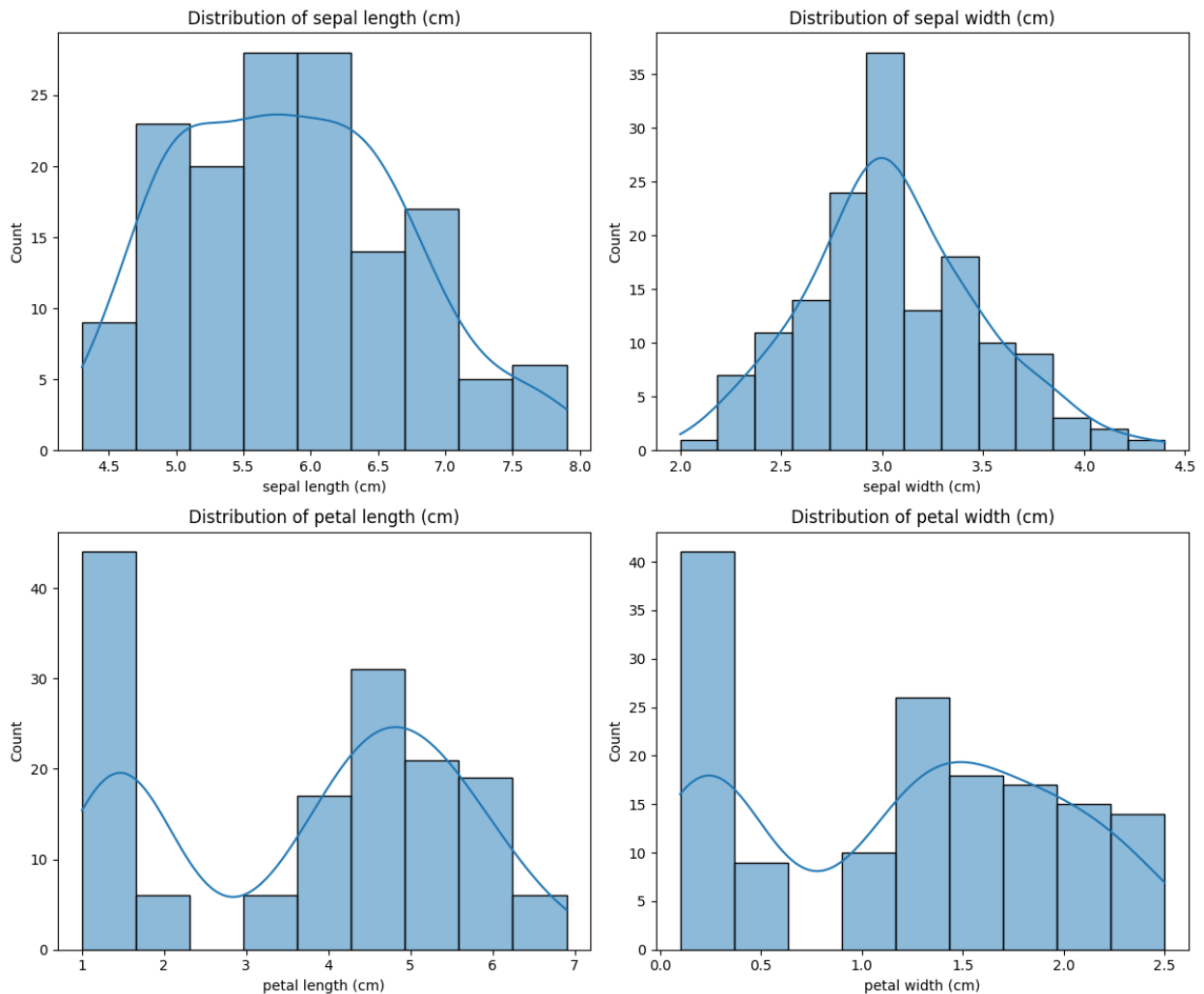
```
import seaborn as sns
import matplotlib.pyplot as plt
from sklearn.datasets import load_iris
import pandas as pd

# Load the Iris dataset
iris = load_iris()
df = pd.DataFrame(data=iris.data, columns=iris.feature_names)
df['species'] = iris.target_names[iris.target]

# Create histograms for sepal and petal features
```

```
plt.figure(figsize=(12, 10))
for i, feature in enumerate(iris.feature_names):
    plt.subplot(2, 2, i+1)
    sns.histplot(df[feature], kde=True)
    plt.title(f'Distribution of {feature}')

plt.tight_layout()
plt.show()
```



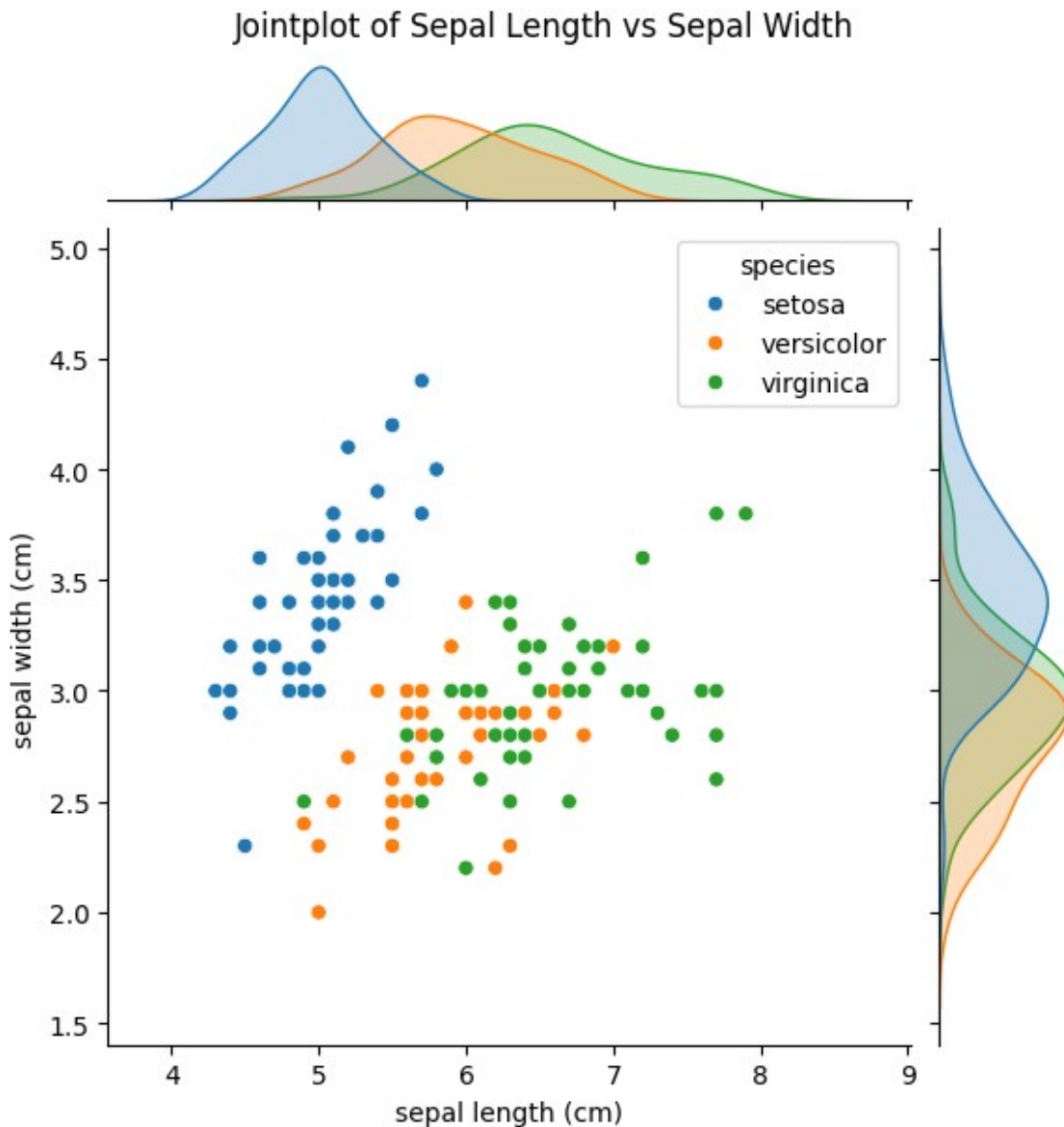
Jointplot of Sepal Length vs Sepal Width:

```
import seaborn as sns
import matplotlib.pyplot as plt
from sklearn.datasets import load_iris
import pandas as pd

# Load the Iris dataset
iris = load_iris()
```

```
df = pd.DataFrame(data=iris.data, columns=iris.feature_names)
df['species'] = iris.target_names[iris.target]

# Create a joint plot
sns.jointplot(data=df, x='sepal length (cm)', y='sepal width (cm)',
             hue='species', kind='scatter')
plt.suptitle('Jointplot of Sepal Length vs Sepal Width', y=1.02)
plt.show()
```



KDE Plot for Setosa Species (Sepal Length vs Sepal Width):

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

```

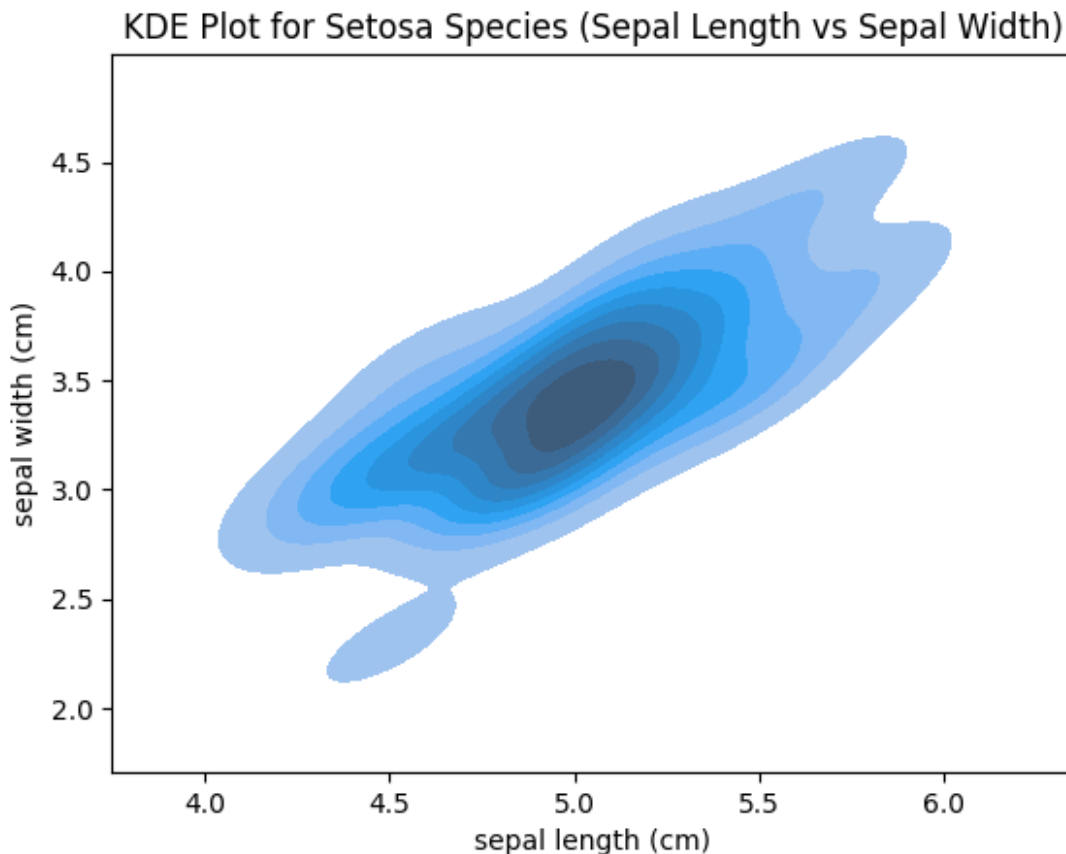
from sklearn.datasets import load_iris
import pandas as pd

# Load the Iris dataset
iris = load_iris()
df = pd.DataFrame(data=iris.data, columns=iris.feature_names)
df['species'] = iris.target_names[iris.target]

# Filter for Setosa species
setosa_df = df[df['species'] == 'setosa']

# Create a KDE plot
sns.kdeplot(data=setosa_df, x='sepal length (cm)', y='sepal width (cm)', fill=True)
plt.title('KDE Plot for Setosa Species (Sepal Length vs Sepal Width)')
plt.show()

```



KDE Plot for Setosa Species (Petal Length vs Petal Width):

```

import seaborn as sns
import matplotlib.pyplot as plt
from sklearn.datasets import load_iris
import pandas as pd

```

```
# Load the Iris dataset
iris = load_iris()
df = pd.DataFrame(data=iris.data, columns=iris.feature_names)
df['species'] = iris.target_names[iris.target]

# Filter for Setosa species
setosa_df = df[df['species'] == 'setosa']

# Create a KDE plot
sns.kdeplot(data=setosa_df, x='petal length (cm)', y='petal width (cm)', fill=True)
plt.title('KDE Plot for Setosa Species (Petal Length vs Petal Width)')
plt.show()
```

