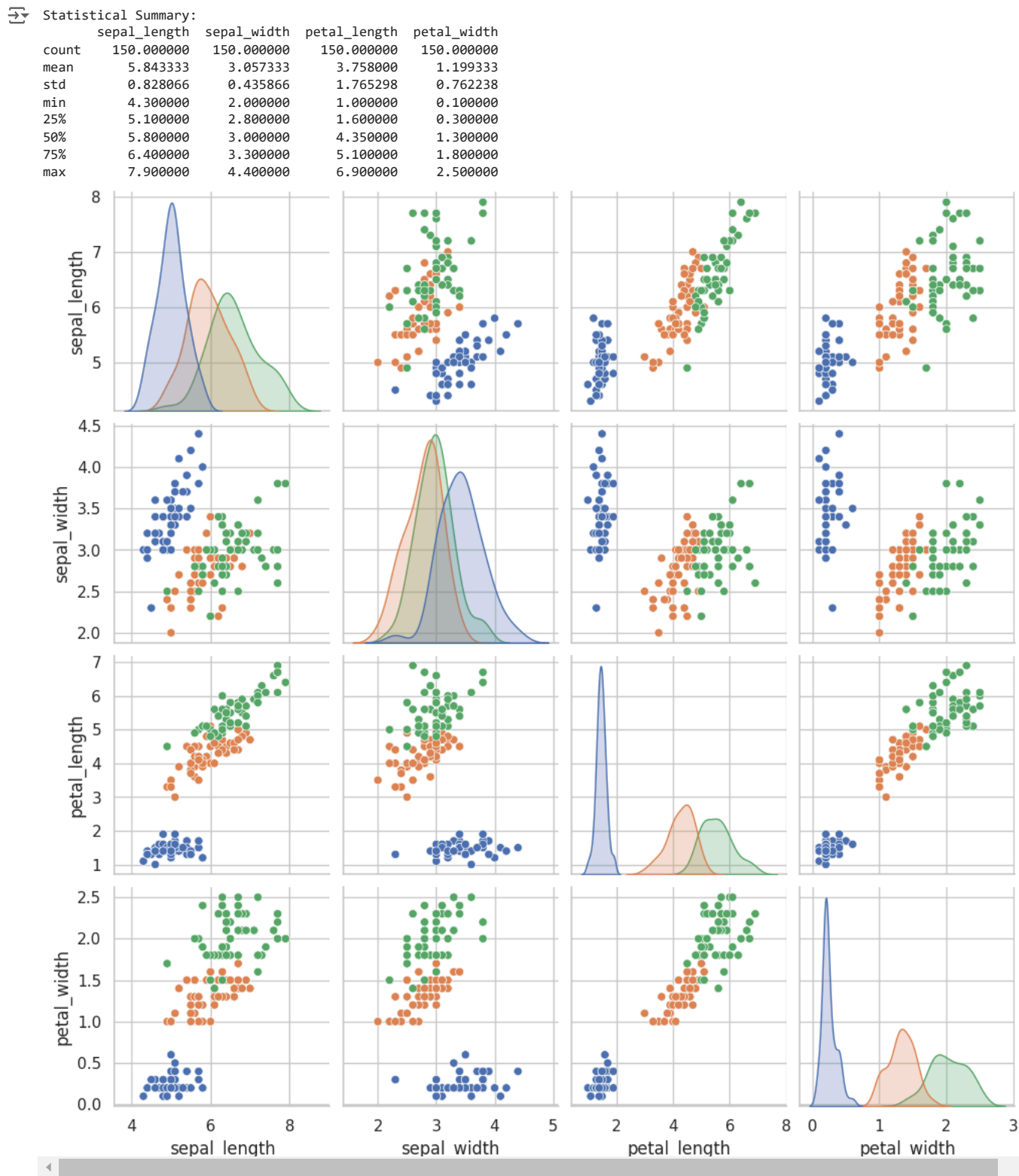


1.General Statistics Plot (Matplotlib or Seaborn):

```
import seaborn as sns
import pandas as pd
import matplotlib.pyplot as plt
# Load the Iris dataset
iris = sns.load_dataset('iris')
# Display a statistical summary using Pandas
print("Statistical Summary:")
print(iris.describe())
# Create a pairplot using Seaborn
sns.pairplot(iris, hue="species", height = 2.5)
# Show the plot
plt.show()
```

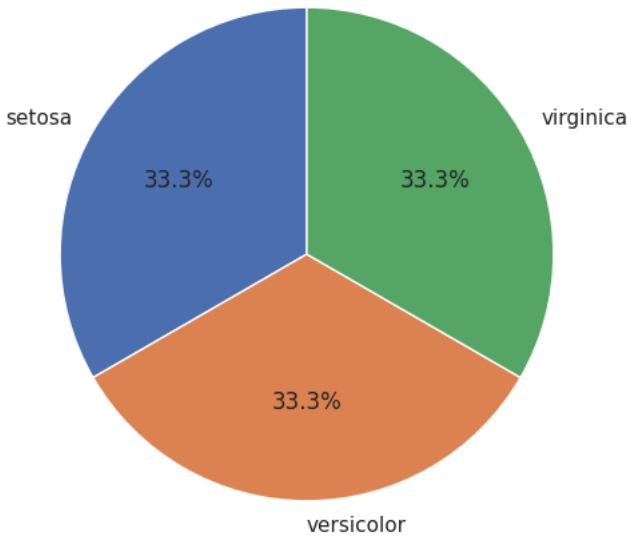


2. Pie Plot for Species Frequency:

```
import seaborn as sns
import matplotlib.pyplot as plt
# Load the Iris dataset
iris = sns.load_dataset('iris')
# Compute the frequency of each species
species_counts = iris['species'].value_counts()
# Create a pie chart
plt.figure(figsize=(6, 6))
plt.pie(species_counts, labels=species_counts.index, autopct='%1.1f%%', startangle=90)
# Set the plot title
plt.title('Frequency of Iris Species')
plt.show()
```

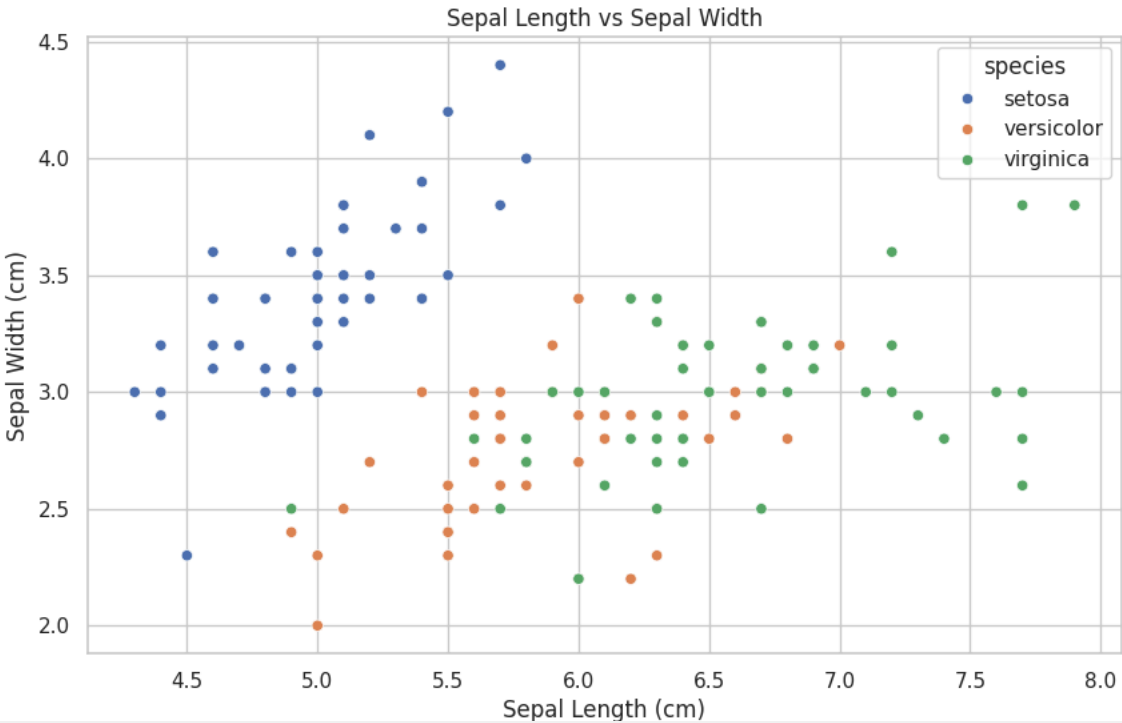


Frequency of Iris Species



3. Relationship Between Sepal Length and Width:

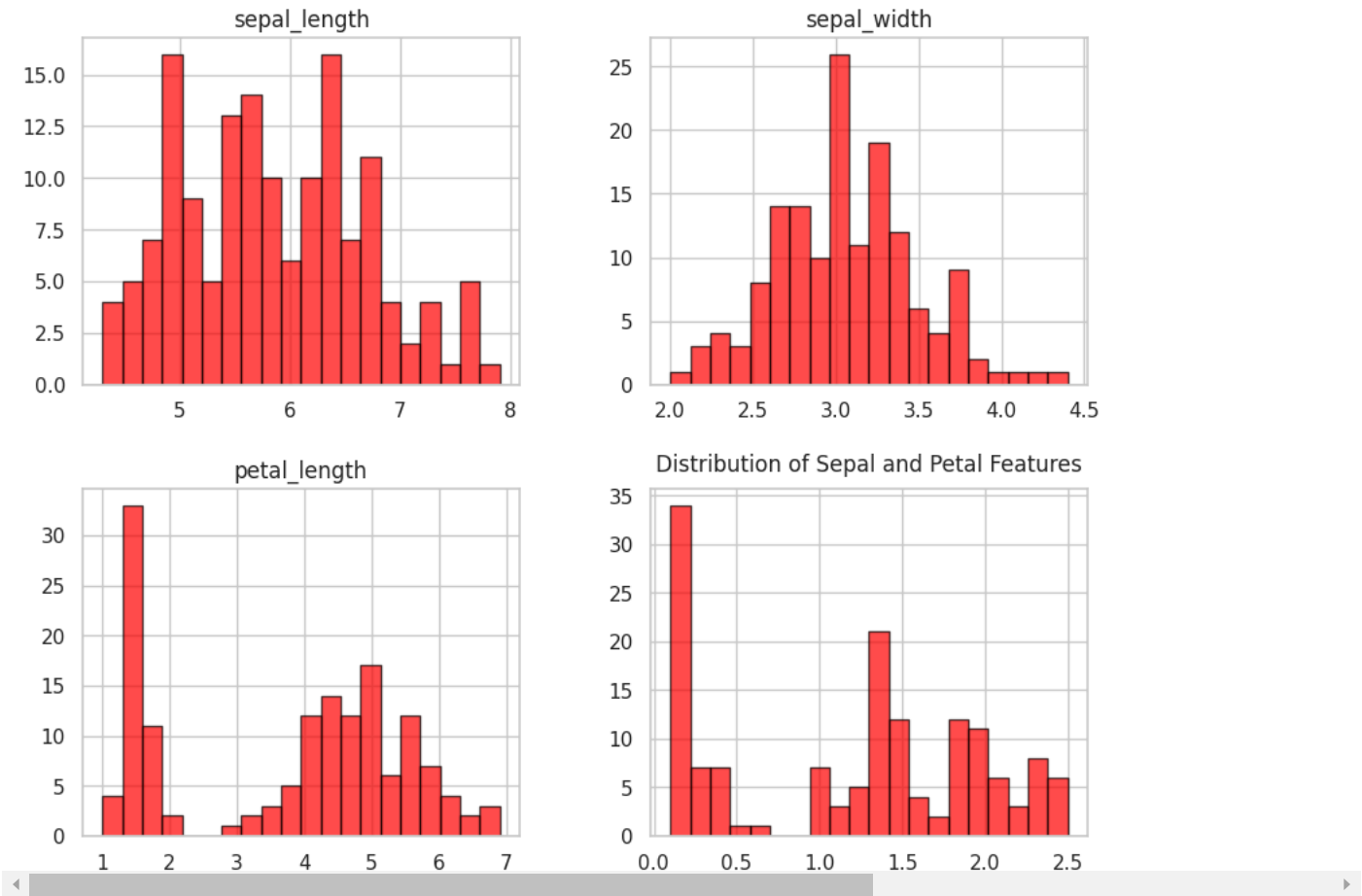
```
import seaborn as sns
import matplotlib.pyplot as plt
# Load the Iris dataset
iris = sns.load_dataset('iris')
# Create a scatter plot to show the relationship between sepal length and sepal width
plt.figure(figsize=(10, 6))
sns.scatterplot(x='sepal_length', y='sepal_width', hue='species', data=iris)
# Set the plot title
plt.title('Sepal Length vs Sepal Width')
plt.xlabel('Sepal Length (cm)')
plt.ylabel('Sepal Width (cm)')
#show the plot
plt.show()
```



4. Distribution of Sepal and Petal Features:

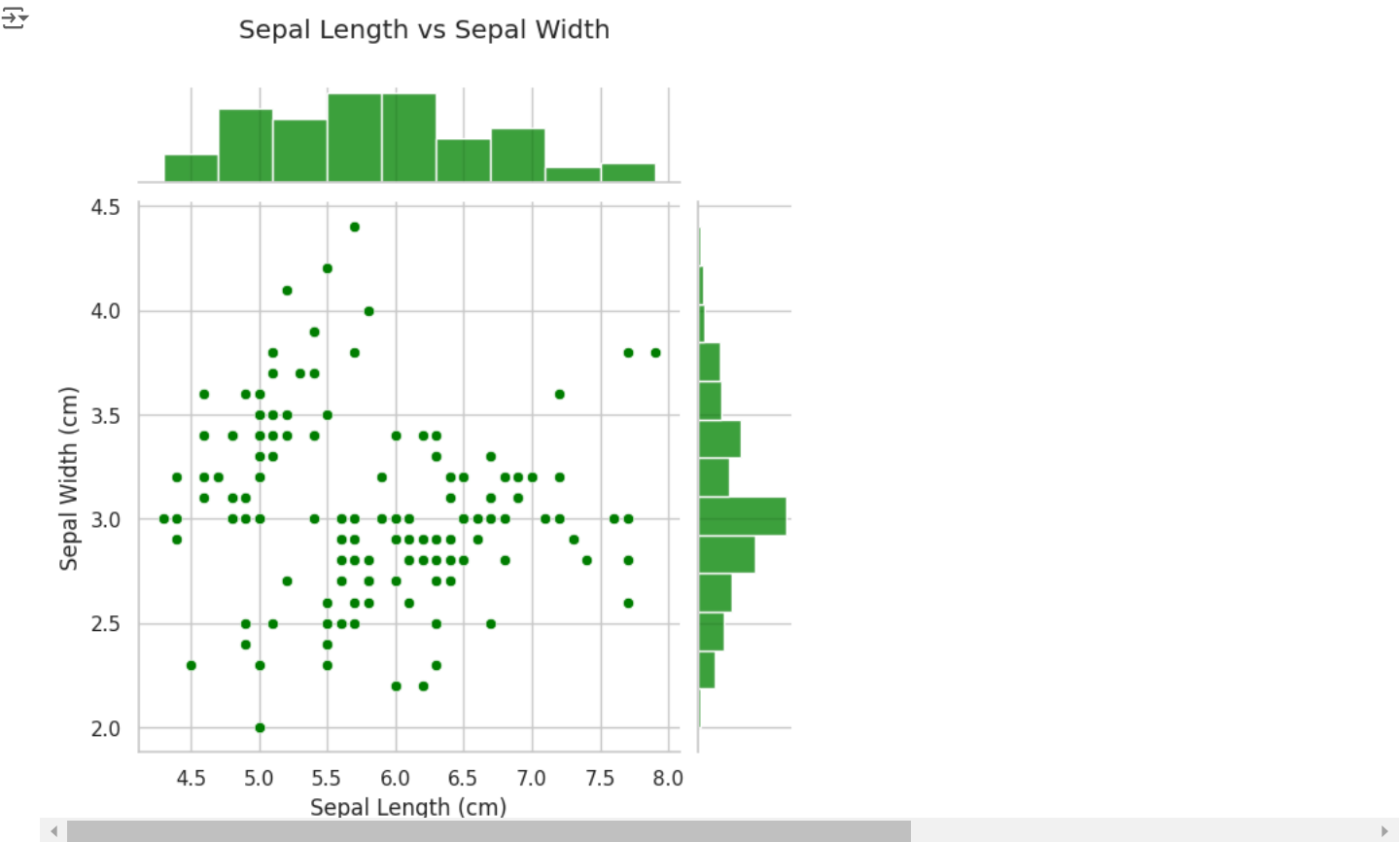
```
import seaborn as sns
import matplotlib.pyplot as plt
# Load the Iris dataset
iris = sns.load_dataset('iris')
# Distribution of Sepal and Petal features
plt.figure(figsize=(10, 8))
iris[['sepal_length', 'sepal_width', 'petal_length', 'petal_width']].hist(bins=20, edgecolor='black', color='red',alpha=0.7, figsize=(10, 8))
# Set the plot title
plt.title('Distribution of Sepal and Petal Features', y=1.02)
#show the plot
plt.show()
```

<Figure size 1000x800 with 0 Axes>



5. Jointplot of Sepal Length vs Sepal Width:

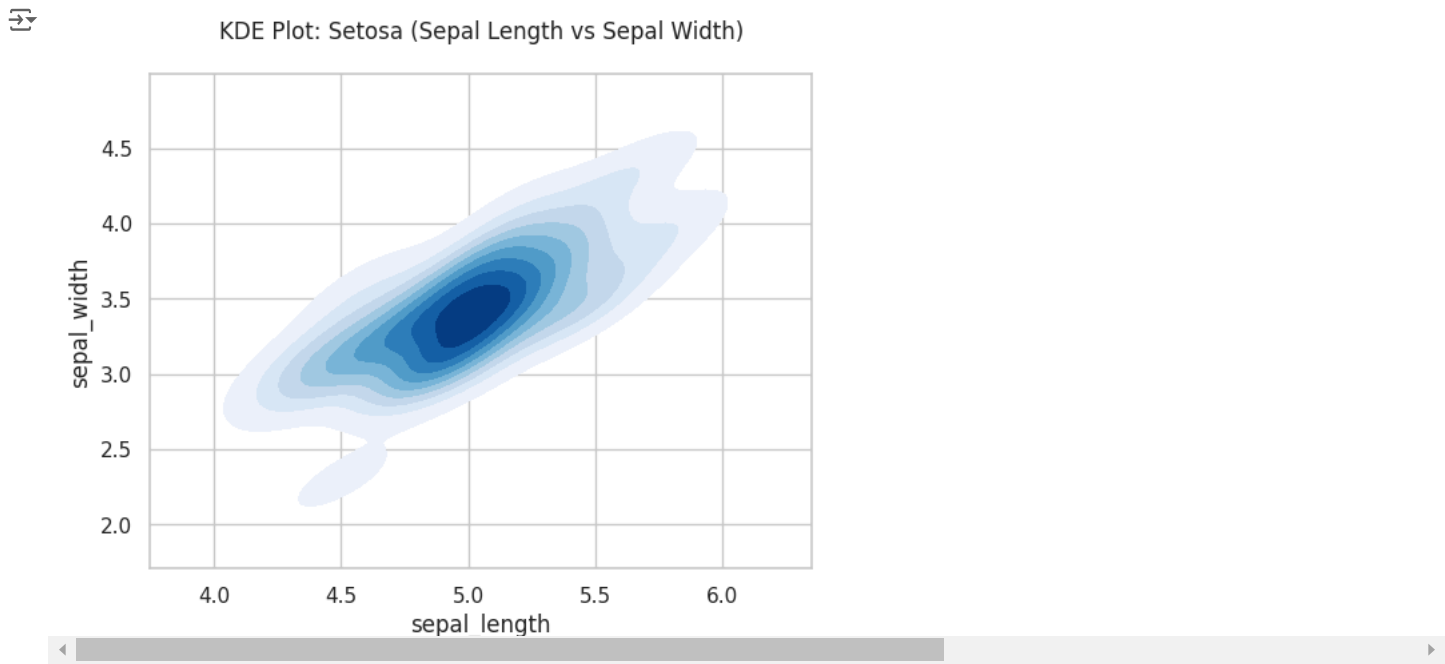
```
import seaborn as sns
import matplotlib.pyplot as plt
# Load the Iris dataset
iris = sns.load_dataset('iris')
# Create a joint plot to show the relationship between sepal length and sepal width
sns.jointplot(x='sepal_length', y='sepal_width', data=iris,color='green', kind='scatter')
# Set the plot title
plt.suptitle("Sepal Length vs Sepal Width",y=1.06)
plt.xlabel('Sepal Length (cm)')
plt.ylabel('Sepal Width (cm)')
#show the plot
plt.show()
```



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

```
import seaborn as sns
import matplotlib.pyplot as plt
# Load the Iris dataset
iris = sns.load_dataset('iris')
```

```
# Filter dataset for Setosa species
setosa = iris[iris['species'] == 'setosa']
# KDE plot for Sepal Length vs Sepal Width
sns.kdeplot(x='sepal_length', y='sepal_width', data=setosa, cmap='Blues', fill=True)
#set the plot title
plt.title("KDE Plot: Setosa (Sepal Length vs Sepal Width)",y=1.05)
#show the plot
plt.show()
```



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

```
import seaborn as sns
import matplotlib.pyplot as plt
# Load the Iris dataset
iris = sns.load_dataset('iris')
# KDE plot for Petal Length vs Petal Width
sns.kdeplot(x='petal_length', y='petal_width', data=setosa, cmap='Paired', fill=True)
#set the plot title
plt.title("KDE Plot: Setosa (Petal Length vs Petal Width)",y=1.04)
#show the plot
plt.show()
```

