General Statistics Plot (Matplotlib or Seaborn):-

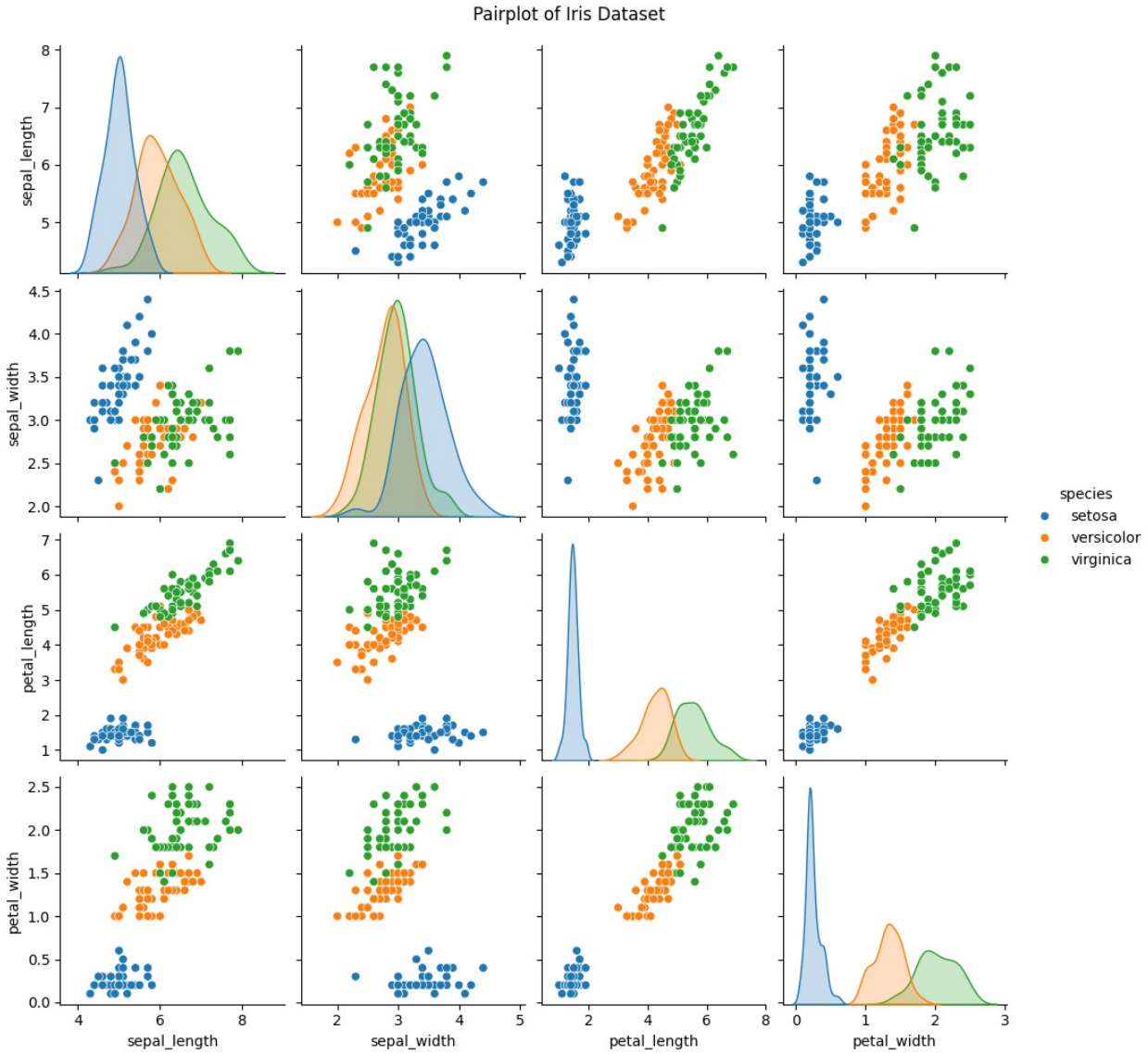
```
import seaborn as sns
import matplotlib.pyplot as plt
import pandas as pd

# Load Iris dataset
iris = sns.load_dataset('iris')

# Using pandas describe to summarize statistics
summary_stats = iris.describe()
print(summary_stats)

# Using Seaborn pairplot to visualize relationships
sns.pairplot(iris, hue='species')
plt.suptitle("Pairplot of Iris Dataset", y=1.02)
plt.show()
```

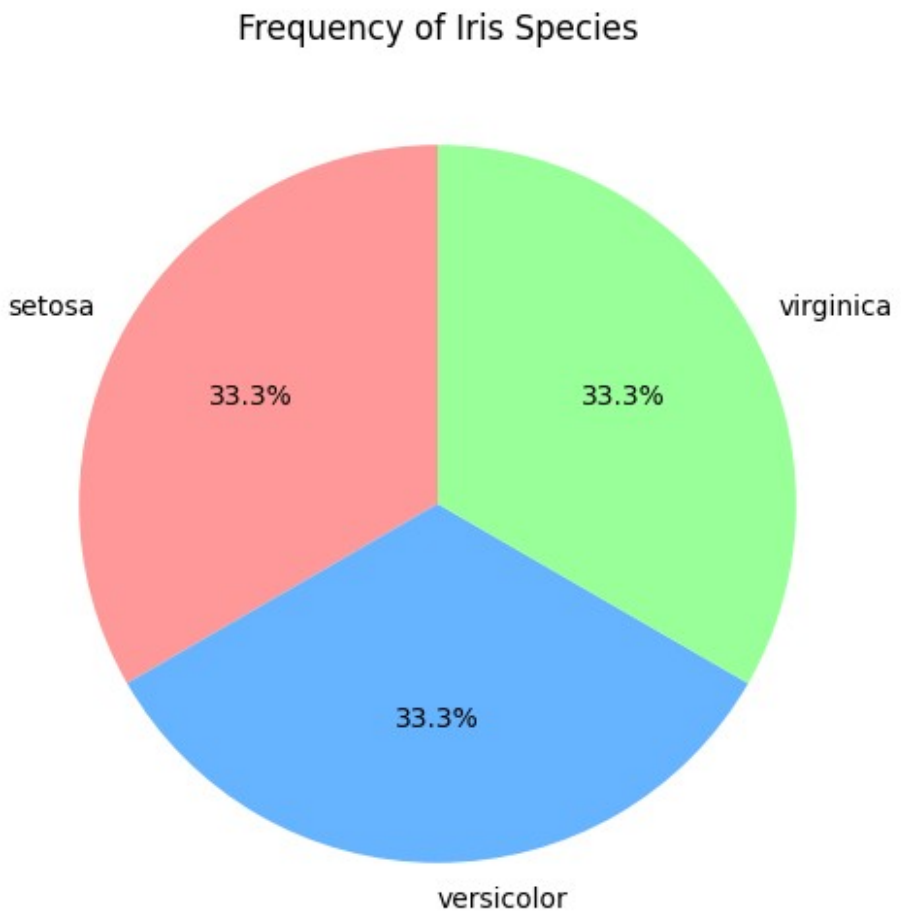
```
       sepal_length  sepal_width  petal_length  petal_width
count    150.000000   150.000000    150.000000   150.000000
mean       5.843333     3.057333      3.758000     1.199333
std        0.828066     0.435866      1.765298     0.762238
min        4.300000     2.000000      1.000000     0.100000
25%        5.100000     2.800000      1.600000     0.300000
50%        5.800000     3.000000      4.350000     1.300000
75%        6.400000     3.300000      5.100000     1.800000
max        7.900000     4.400000      6.900000     2.500000
```



*** Pie Plot for Species Frequency:-***

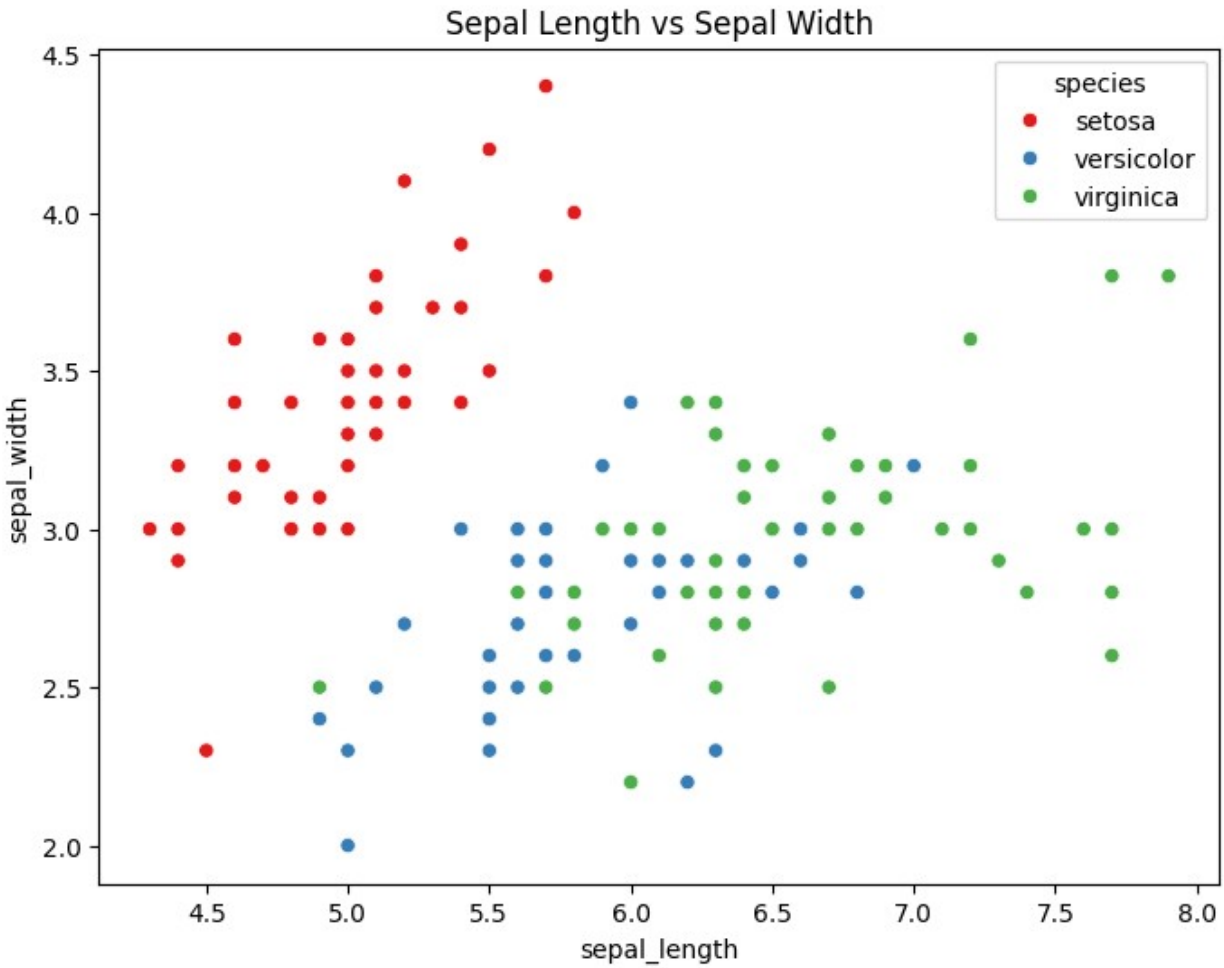
```
# Create a pie chart of species frequency
species_counts = iris['species'].value_counts()

# Plot Pie Chart
plt.figure(figsize=(6, 6))
plt.pie(species_counts, labels=species_counts.index, autopct='%1.1f%
%', startangle=90, colors=['#ff9999','#66b3ff','#99ff99'])
plt.title('Frequency of Iris Species')
plt.show()
```



Scatter Plot: Relationship Between Sepal Length and Width:-

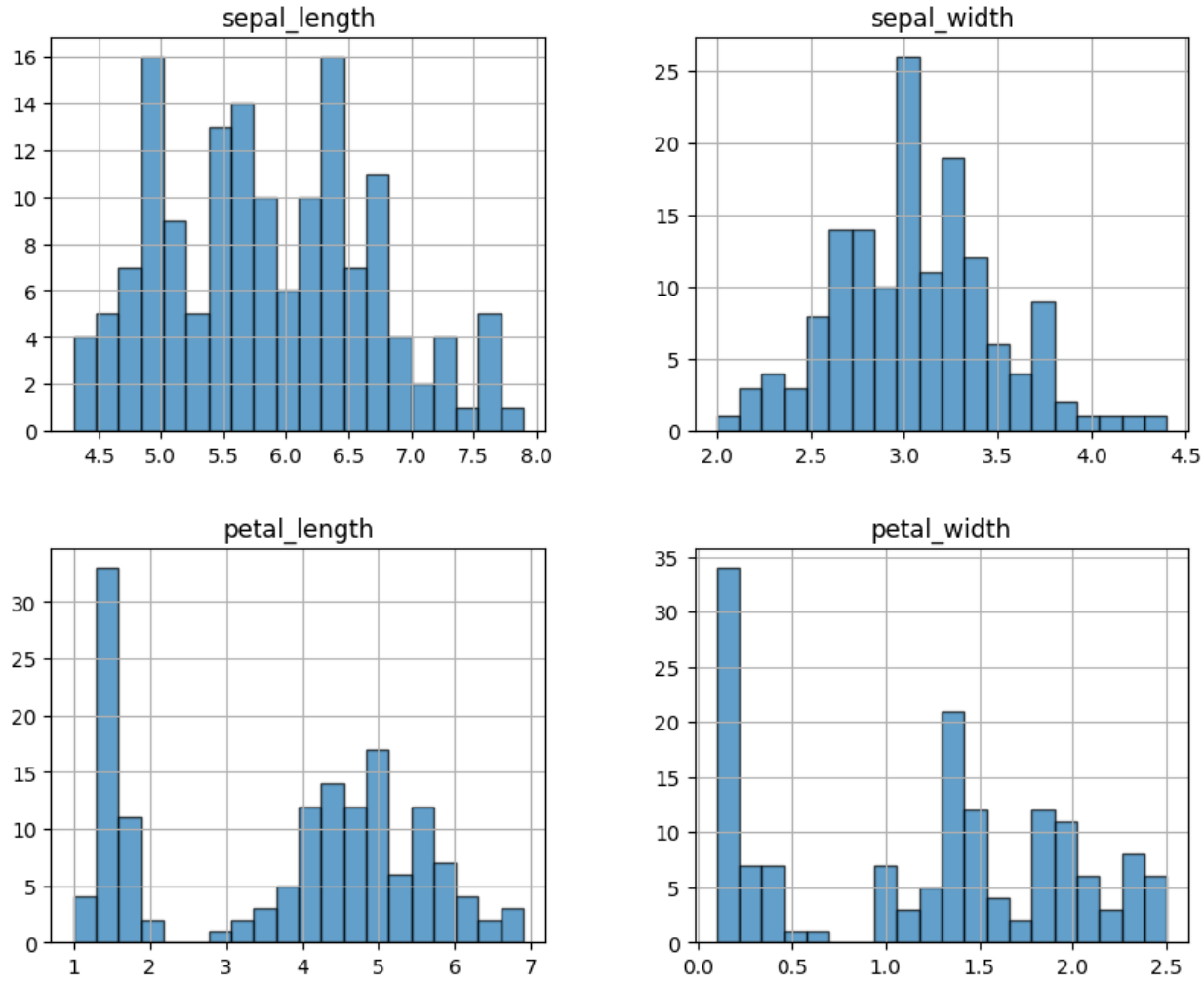
```
# Scatter plot for sepal length vs sepal width
plt.figure(figsize=(8, 6))
sns.scatterplot(x='sepal_length', y='sepal_width', hue='species',
data=iris, palette='Set1')
plt.title('Sepal Length vs Sepal Width')
plt.show()
```



Distribution of Sepal and Petal Features:-

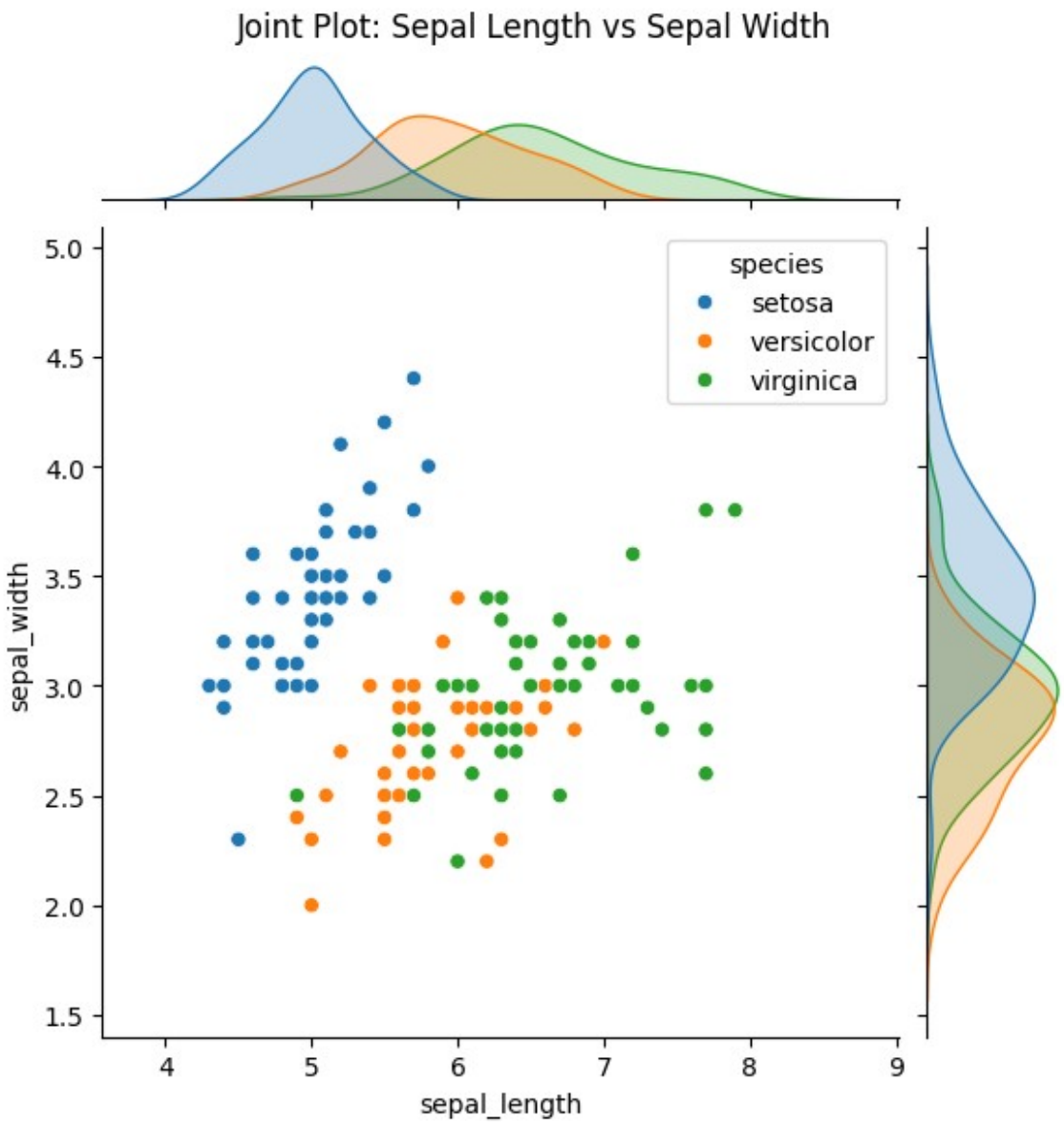
```
# Distribution of Sepal and Petal features
plt.figure(figsize=(10, 8))
iris[['sepal_length', 'sepal_width', 'petal_length',
'petal_width']].hist(bins=20, edgecolor='black', alpha=0.7,
figsize=(10, 8))
plt.suptitle('Distribution of Sepal and Petal Features', y=1.02)
plt.show()
```

```
<Figure size 1000x800 with 0 Axes>
```



Jointplot of Sepal Length vs Sepal Width:-

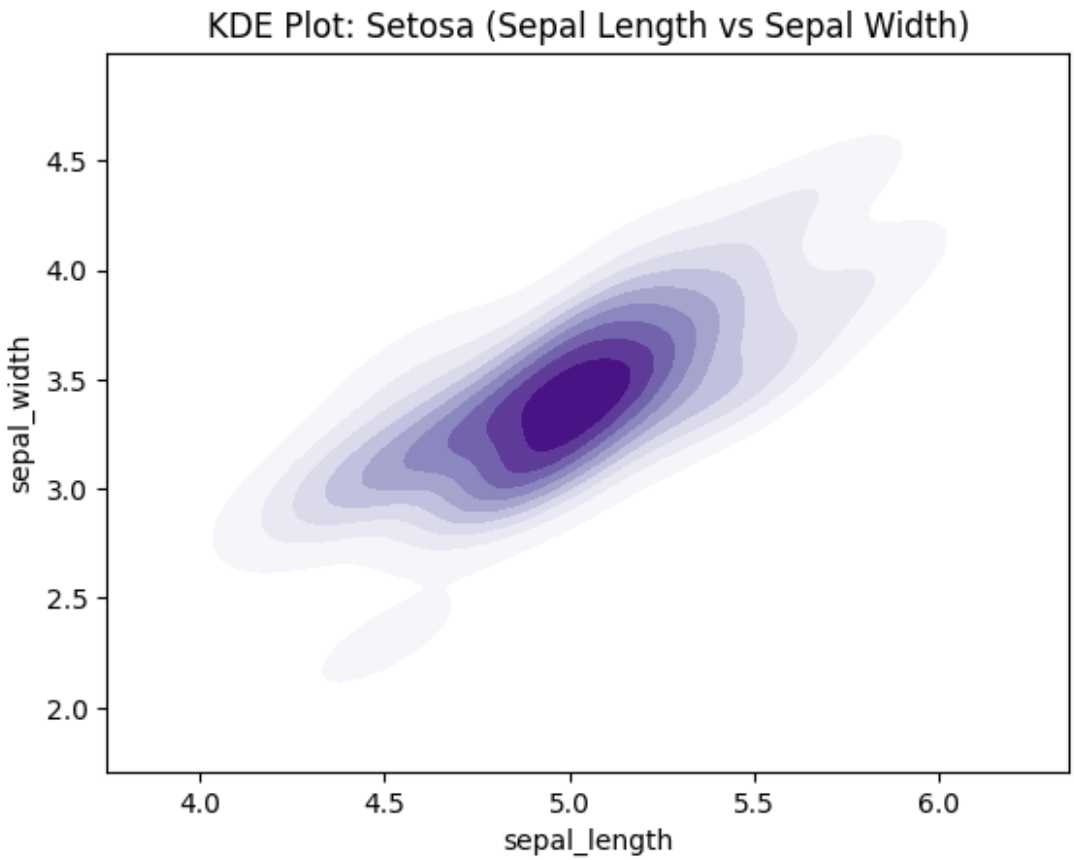
```
# Jointplot for sepal length vs sepal width
sns.jointplot(x='sepal_length', y='sepal_width', data=iris,
kind='scatter', hue='species')
plt.suptitle("Joint Plot: Sepal Length vs Sepal Width", y=1.02)
plt.show()
```



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

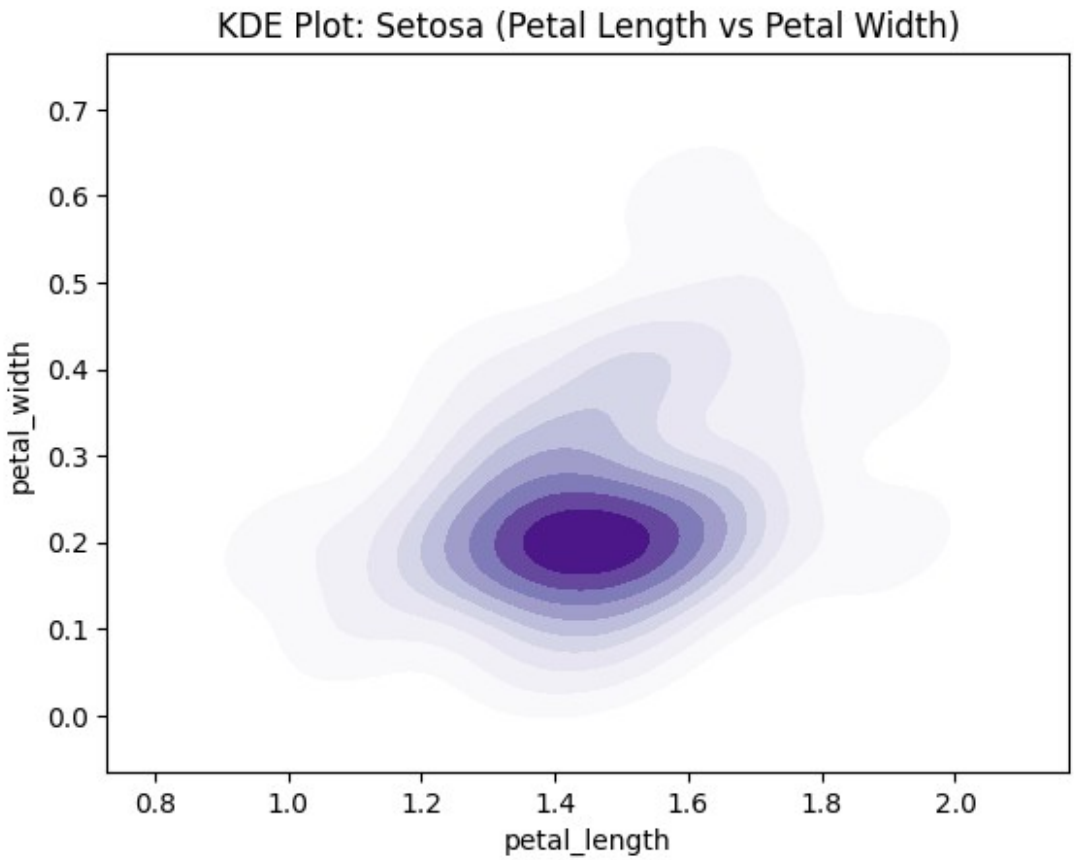
```
# Filter dataset for Setosa species
setosa = iris[iris['species'] == 'setosa']

# KDE plot for Sepal Length vs Sepal Width
sns.kdeplot(x='sepal_length', y='sepal_width', data=setosa,
cmap='Purples', fill=True)
plt.title("KDE Plot: Setosa (Sepal Length vs Sepal Width)")
plt.show()
```



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

```
# KDE plot for Petal Length vs Petal Width
sns.kdeplot(x='petal_length', y='petal_width', data=setosa,
cmap='Purples', fill=True)
plt.title("KDE Plot: Setosa (Petal Length vs Petal Width)")
plt.show()
```


KDE Plot: Setosa (Petal Length vs Petal Width)
petal_width
petal_length
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
1.0
1.2
1.4
1.6
1.8
2.0