

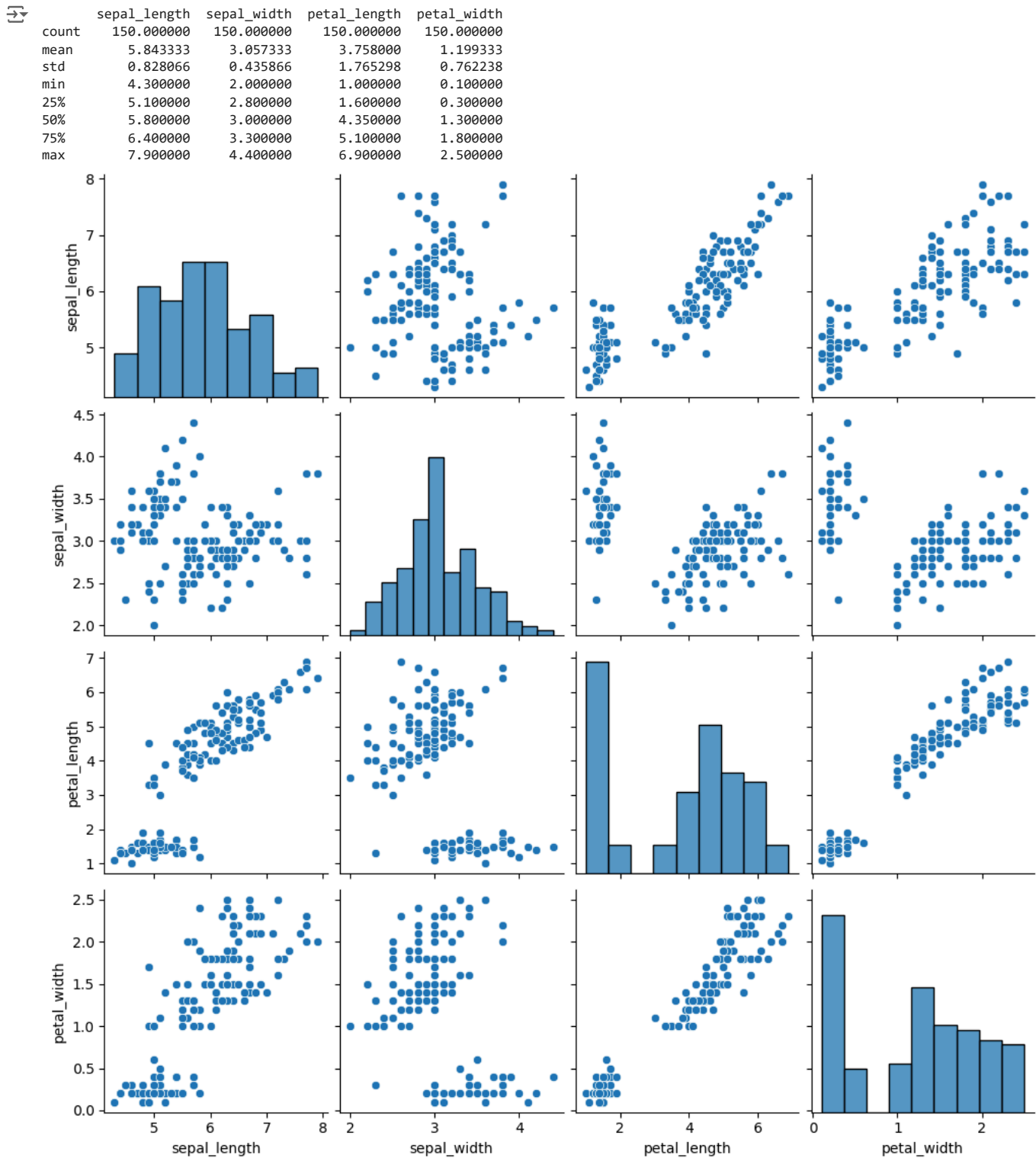
General Statistics Plot (Matplotlib or Seaborn):

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

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

# General statistical summary using describe
summary = iris.describe()
print(summary)

# General statistical pair plot
sns.pairplot(iris)
plt.show()
```



Pie Plot for Species Frequency:

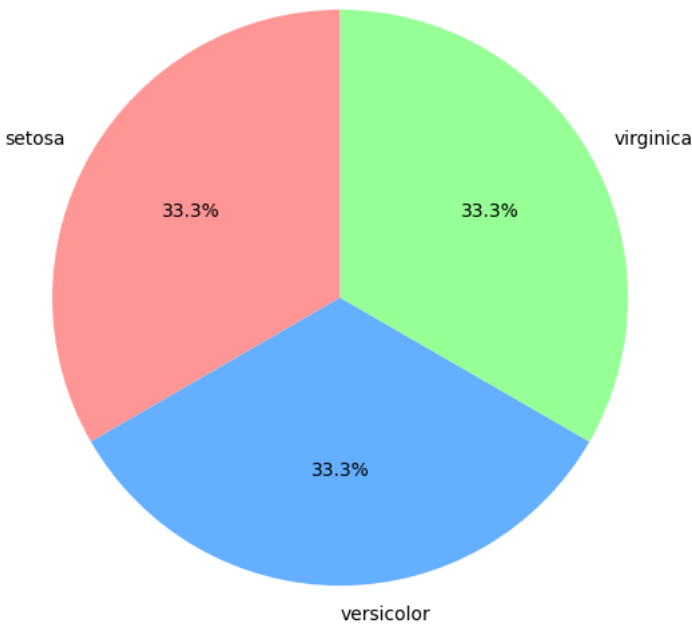
```
import seaborn as sns
import pandas as pd
import matplotlib.pyplot as plt

# Species frequency count
species_count = iris['species'].value_counts()

# Pie chart
plt.figure(figsize=(7, 7))
plt.pie(species_count, labels=species_count.index, autopct='%1.1f%%', startangle=90, colors=['#ff9999', '#66b3ff', '#99ff99'])
plt.title('Species Frequency in Iris Dataset')
plt.show()
```

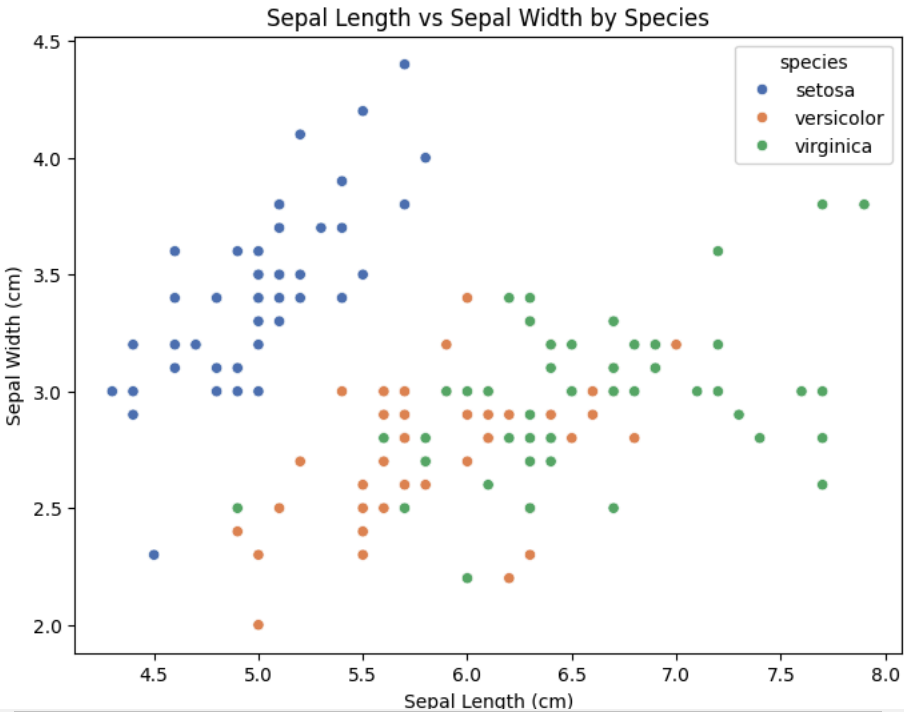


Species Frequency in Iris Dataset



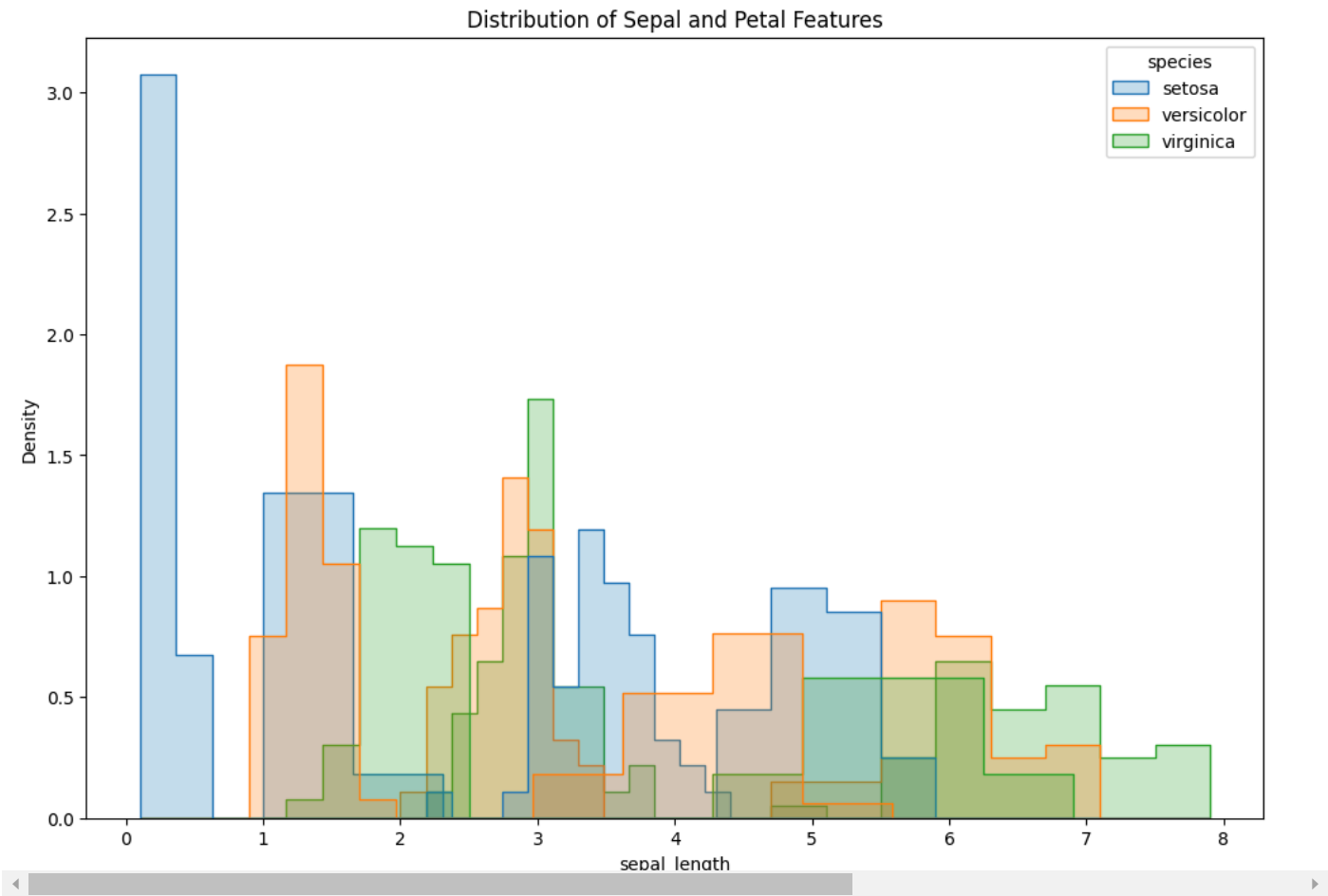
Relationship Between Sepal Length and Width:

```
import seaborn as sns
import pandas as pd
import matplotlib.pyplot as plt
# Scatter plot of Sepal Length vs Sepal Width
plt.figure(figsize=(8, 6))
sns.scatterplot(x='sepal_length', y='sepal_width', hue='species', data=iris, palette='deep')
plt.title('Sepal Length vs Sepal Width by Species')
plt.xlabel('Sepal Length (cm)')
plt.ylabel('Sepal Width (cm)')
plt.show()
```



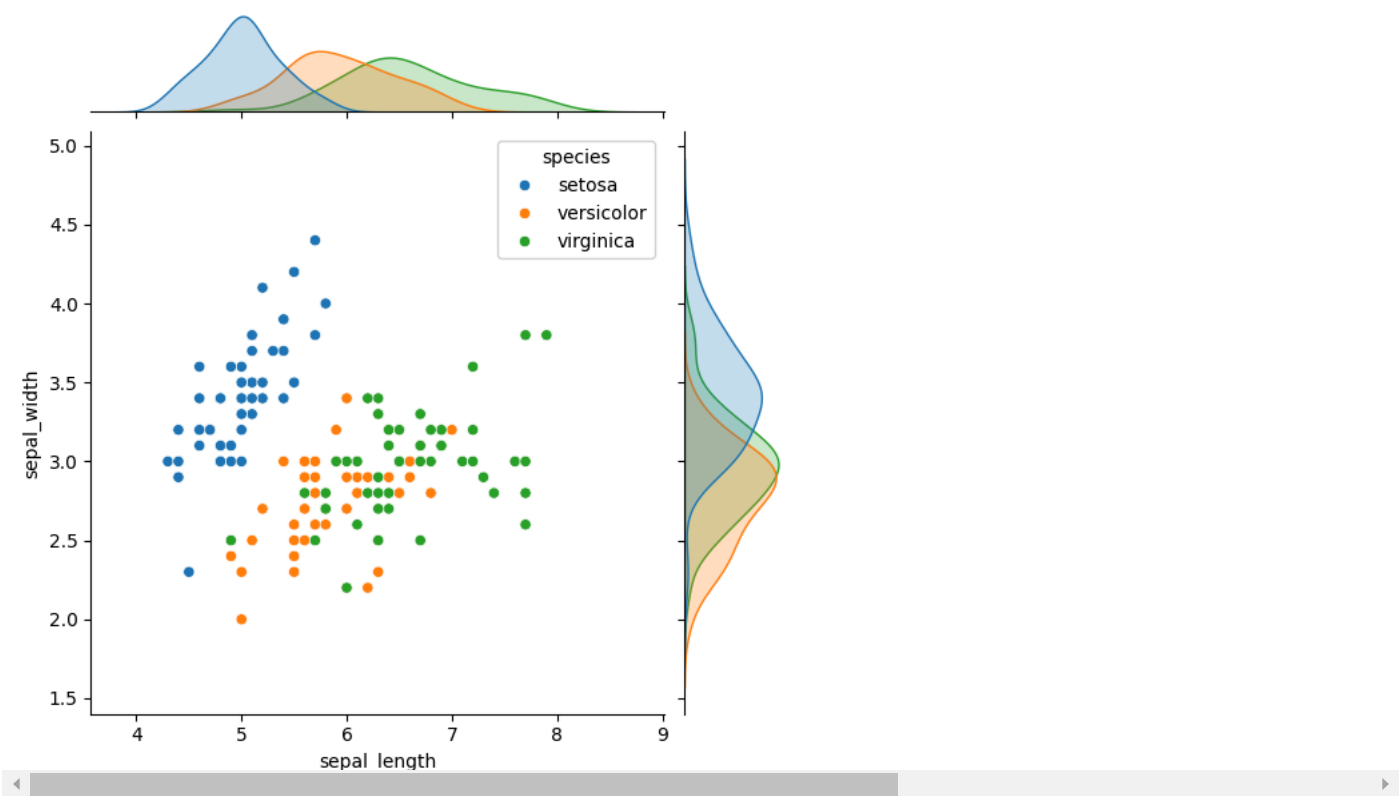
Distribution of Sepal and Petal Features:

```
import seaborn as sns
import pandas as pd
import matplotlib.pyplot as plt
# Distribution plots for Sepal and Petal Features
plt.figure(figsize=(12, 8))
sns.histplot(iris, x='sepal_length', hue='species', element='step', stat='density', common_norm=False)
sns.histplot(iris, x='sepal_width', hue='species', element='step', stat='density', common_norm=False)
sns.histplot(iris, x='petal_length', hue='species', element='step', stat='density', common_norm=False)
sns.histplot(iris, x='petal_width', hue='species', element='step', stat='density', common_norm=False)
plt.title('Distribution of Sepal and Petal Features')
plt.show()
```



Jointplot of Sepal Length vs Sepal Width:

```
import seaborn as sns
import pandas as pd
import matplotlib.pyplot as plt
# Joint plot of Sepal Length vs Sepal Width
sns.jointplot(x='sepal_length', y='sepal_width', data=iris, kind='scatter', hue='species')
plt.show()
```



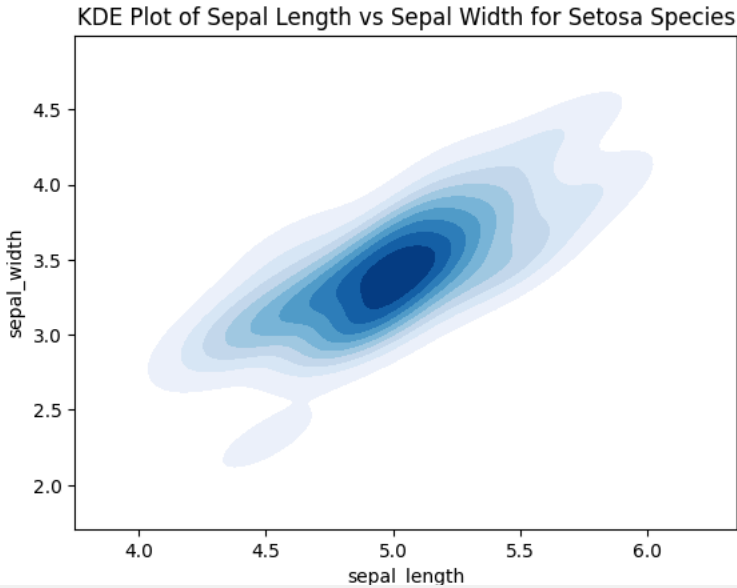
KDE Plot for Setosa Species (Sepal Length vs Sepal Width):

```
import seaborn as sns
import pandas as pd
import matplotlib.pyplot as plt
# Filter setosa species data
setosa = iris[iris['species'] == 'setosa']

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

```
<ipython-input-6-003f3c77e946>:8: FutureWarning:
`shade` is now deprecated in favor of `fill`; setting `fill=True`.
This will become an error in seaborn v0.14.0; please update your code.

sns.kdeplot(x='sepal_length', y='sepal_width', data=setosa, cmap="Blues", shade=True)
```



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

```
import seaborn as sns
import pandas as pd
import matplotlib.pyplot as plt
# KDE plot for Petal Length vs Petal Width for Setosa
sns.kdeplot(x='petal_length', y='petal_width', data=setosa, cmap="Reds", shade=True)
plt.title('KDE Plot of Petal Length vs Petal Width for Setosa Species')
plt.show()
```

```
<ipython-input-7-b59283110a32>:5: FutureWarning:
`shade` is now deprecated in favor of `fill`; setting `fill=True`.
This will become an error in seaborn v0.14.0; please update your code.

sns.kdeplot(x='petal_length', y='petal_width', data=setosa, cmap="Reds", shade=True)
```

