```python
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt

from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
from sklearn.neighbors import KNeighborsClassifier
from sklearn.metrics import classification_report, confusion_matrix, accuracy_score
```

```python
iris = load_iris()
```

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

df['species'] = df['species'].map({0: 'setosa', 1: 'versicolor', 2: 'virginica'})
df.head()
```
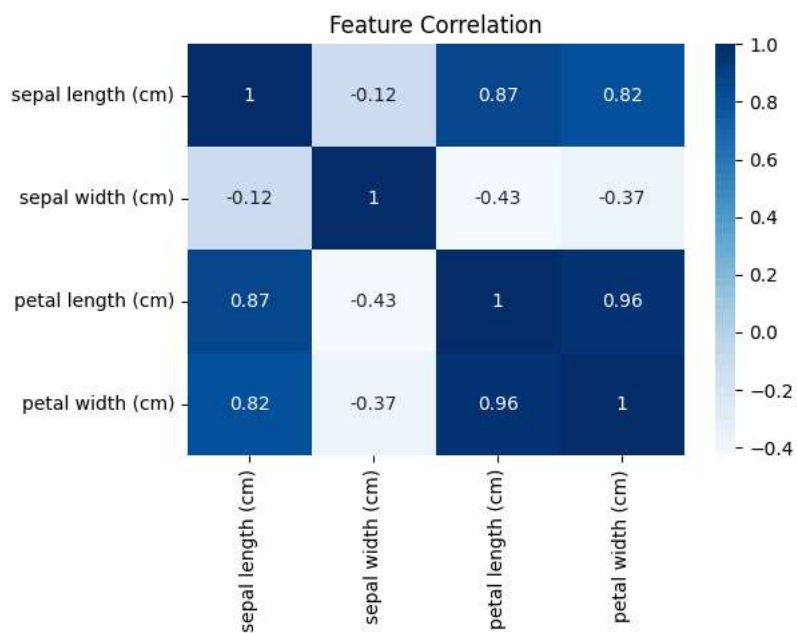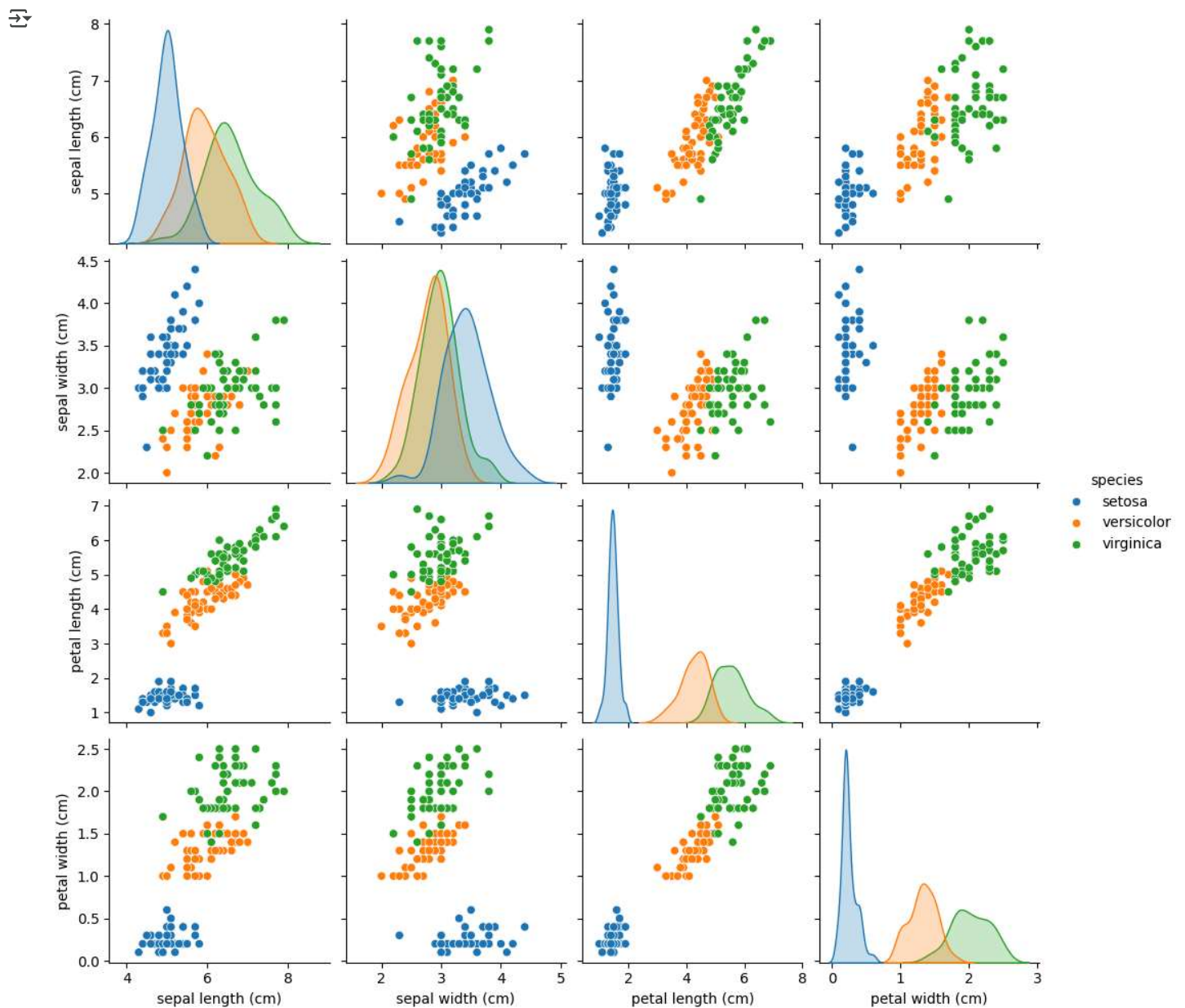
	sepal length (cm)	sepal width (cm)	petal length (cm)	petal width (cm)	species
0	5.1	3.5	1.4	0.2	setosa
1	4.9	3.0	1.4	0.2	setosa
2	4.7	3.2	1.3	0.2	setosa
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa

```python
sns.pairplot(df, hue='species')
plt.show()

plt.figure(figsize=(6,4))

sns.heatmap(df.select_dtypes(include=np.number).corr(), annot=True, cmap='Blues')
plt.title("Feature Correlation")
plt.show()
```

Feature Correlation

```python
X = df.drop('species', axis=1)
y = df['species']
```

```python
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3, random_state=42)
```

```python
model = KNeighborsClassifier(n_neighbors=3)
```

```python
model.fit(X_train, y_train)
```

```
        ▾   KNeighborsClassifier      ⓘ ⓘ
        KNeighborsClassifier(n_neighbors=3)
```

```python
y_pred = model.predict(X_test)
```

```python
print("Confusion Matrix:\n", confusion_matrix(y_test, y_pred))
print("\nClassification Report:\n", classification_report(y_test, y_pred))
print("Accuracy Score:", accuracy_score(y_test, y_pred))
```

```
Confusion Matrix:
 [[19  0  0]
 [ 0 13  0]
 [ 0  0 13]]

Classification Report:
```