

```
In [8]: # Import the Library
import pandas as pd
```

```
In [25]: # Load the breast cancer dataset
from sklearn.datasets import load_breast_cancer
data = load_breast_cancer()
x = data.data
y = data.target
```

```
In [26]: # Create a DataFrame for better visualization
df = pd.DataFrame(data=data.data, columns=data.feature_names)
```

```
In [27]: # Split the data into training and testing sets
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.2, random
```

```
In [19]: # Create and train a Perceptron model
from sklearn.linear_model import Perceptron
clf = Perceptron(max_iter=1000)
clf.fit(x_train, y_train)
```

```
Out[19]:
```

▼ Perceptron
 Perceptron()

```
In [20]: # Make predictions on the testing set
ypred = clf.predict(x_test)
print("Predictions:", ypred)
```

```
Predictions: [0 0 0 1 1 0 0 0 1 1 1 0 1 0 1 0 1 1 1 0 0 1 0 1 1 1 1 1 1 0 1 1
1 0 1 1 0
1 0 1 1 0 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1 0 1 1 1 0 0 1 1 1 0 0 1 1
1 1 1 0 1 1 0 1 0 0 0 0 0 0 1 1 1 1 0 1 1 1 0 0 1 0 0 1 1 1 0 1 0 0
1 1 0]
```

```
In [14]: # Calculate and display accuracy
from sklearn.metrics import accuracy_score, confusion_matrix
acc = accuracy_score(y_test, ypred)
print("Accuracy:", acc)

# Generate and display the confusion matrix
conf_matrix = confusion_matrix(y_test, ypred)
print("Confusion Matrix:")
print(conf_matrix)
```

```
Accuracy: 0.935672514619883
Confusion Matrix:
[[ 60   3]
 [  8 100]]
```

In []: