

```
In [1]: import pandas as pd
        from sklearn.model_selection import train_test_split
        from sklearn.naive_bayes import GaussianNB
        from sklearn.metrics import confusion_matrix, classification_report
```

```
In [2]: # Load the dataset
        df = pd.read_csv('iris.csv')
```

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In [4]: # Split the dataset into features (X) and target variable (y)
        X = df.drop('Species', axis=1)
        y = df['Species']
```

```
In [5]: # Split the data into training and testing sets
        X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_stat
```

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In [6]: # Create and train the Naïve Bayes model
        model = GaussianNB()
        model.fit(X_train, y_train)
```

Out[6]: GaussianNB()

```
In [7]: # Make predictions on the testing set
        y_pred = model.predict(X_test)
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In [8]: # Compute the confusion matrix
        cm = confusion_matrix(y_test, y_pred)
```

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In [9]: # Compute other evaluation metrics
        accuracy = (cm[0, 0] + cm[1, 1] + cm[2, 2]) / cm.sum()
        error_rate = 1 - accuracy
        precision = cm[1, 1] / (cm[0, 1] + cm[1, 1] + cm[2, 1])
        recall = cm[1, 1] / (cm[1, 0] + cm[1, 1] + cm[1, 2])
```

```
In [10]: # Print the confusion matrix and evaluation metrics
        print("Confusion Matrix:")
        print(cm)
        print("\nAccuracy:", accuracy)
        print("Error Rate:", error_rate)
        print("Precision:", precision)
        print("Recall:", recall)
```

Confusion Matrix:

```
[[10  0  0]
 [ 0  9  0]
 [ 0  0 11]]
```

Accuracy: 1.0
Error Rate: 0.0
Precision: 1.0
Recall: 1.0

In []: