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# Naïve Bayes Classifier using GaussianNB
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```
From sklearn.datasets import load_iris
```

```
From sklearn.model_selection import train_test_split
```

```
From sklearn.naive_bayes import GaussianNB
```

```
From sklearn.metrics import accuracy_score, classification_report
```

```
# Load dataset
```

```
Iris = load_iris()
```

```
X = iris.data
```

```
Y = iris.target
```

```
# Split into training and testing sets
```

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

```
# Create the model
```

```
Model = GaussianNB()
```

```
# Train the model
```

```
Model.fit(X_train, y_train)
```

```
# Predict on test set
```

```
Y_pred = model.predict(X_test)
```

```
# Evaluate the model
```

```

Print("Predicted:", y_pred)
Print("Actual  :", y_test)
Print("\nAccuracy:", accuracy_score(y_test, y_pred))
Print("\nClassification Report:\n", classification_report(y_test, y_pred,
target_names=iris.target_names))

```

OUTPUT :

```

Predicted: [1 0 2 1 1 0 0 2 1 1 2 2 0 0 0 2 1 0 2 1 2 0 0 2 2 2 2 0 0 0 0 1 1 1 2 0 2 0 0 2 2 1 2 0
0]

```

```

Actual  : [1 0 2 1 1 0 0 2 1 1 2 2 0 0 0 2 1 0 2 1 2 0 0 2 2 2 2 0 0 0 0 1 1 1 2 0 2 0 0 2 2 1 2 0 0]

```

Accuracy: 1.0

Classification Report:

	Precision	recall	f1-score	support
Setosa	1.00	1.00	1.00	16
Versicolor	1.00	1.00	1.00	14
Virginica	1.00	1.00	1.00	15
Accuracy		1.00		45
Macro avg	1.00	1.00	1.00	45
Weighted avg	1.00	1.00	1.00	45