

# Logistic\_Regression

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In [1]: from sklearn.datasets import load_iris
from sklearn.metrics import classification_report, accuracy_score
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LogisticRegression
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In [2]: iris = load_iris()
X_train, X_test, y_train, y_test = train_test_split(iris.data, iris.target, test_size = 0.4, random_state = 17)
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In [3]: model = LogisticRegression()
model.fit(X_train, y_train)
y_pred = model.predict(X_test)

print(classification_report(y_test, y_pred, target_names = iris.target_names))
print('\nAccuracy: {0:.4f}'.format(accuracy_score(y_test, y_pred)))
```

	precision	recall	f1-score	support
setosa	1.00	1.00	1.00	15
versicolor	1.00	0.93	0.96	27
virginica	0.90	1.00	0.95	18
accuracy			0.97	60
macro avg	0.97	0.98	0.97	60
weighted avg	0.97	0.97	0.97	60

Accuracy: 0.9667

```
In [4]: from sklearn.metrics import confusion_matrix
C = confusion_matrix(y_test, y_pred)
print(C)
print()
print(C.sum(axis=1))
```

```
[[15  0  0]
 [ 0 25  2]
 [ 0  0 18]]
```

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[15 27 18]
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In [ ]:
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