

```
In [2]: from sklearn.datasets import load_breast_cancer
import pandas as pd
from sklearn.model_selection import train_test_split
import numpy as np
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import accuracy_score
```

```
In [3]: df = load_breast_cancer()
```

```
In [3]: df.feature_names
```

```
Out[3]: array(['mean radius', 'mean texture', 'mean perimeter', 'mean area',
              'mean smoothness', 'mean compactness', 'mean concavity',
              'mean concave points', 'mean symmetry', 'mean fractal dimension',
              'radius error', 'texture error', 'perimeter error', 'area error',
              'smoothness error', 'compactness error', 'concavity error',
              'concave points error', 'symmetry error',
              'fractal dimension error', 'worst radius', 'worst texture',
              'worst perimeter', 'worst area', 'worst smoothness',
              'worst compactness', 'worst concavity', 'worst concave points',
              'worst symmetry', 'worst fractal dimension'], dtype='<U23')
```

```
In [4]: df.target_names
```

```
Out[4]: array(['malignant', 'benign'], dtype='<U9')
```

```
In [5]: X_train , X_test , y_train , y_test = train_test_split(df.data ,df.target , test_size =
```

```
In [6]: lr = LogisticRegression()

lr.fit(X_train,y_train)
```

C:\Users\soulo\anaconda3\lib\site-packages\sklearn\linear_model_logistic.py:458: ConvergenceWarning: lbfgs failed to converge (status=1):
STOP: TOTAL NO. of ITERATIONS REACHED LIMIT.

Increase the number of iterations (max_iter) or scale the data as shown in:
<https://scikit-learn.org/stable/modules/preprocessing.html>
Please also refer to the documentation for alternative solver options:
https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression
n_iter_i = _check_optimize_result(

```
Out[6]: ▼ LogisticRegression
LogisticRegression()
```

```
In [7]: y_pred = lr.predict(X_test)
```

```
In [8]: accuracy = accuracy_score(y_test,y_pred)
```

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In [9]: accuracy*100
```

```
Out[9]: 93.85964912280701
```

```
In [7]: !jupyter nbconvert --to webpdf --allow-chromium-download logistic.ipynb
```

[NbConvertApp] Converting notebook logistic.ipynb to webpdf
[NbConvertApp] Building PDF
[NbConvertApp] PDF successfully created
[NbConvertApp] Writing 137992 bytes to logistic.pdf

