

## Logistic Regression:

### Code:

```
#!/usr/bin/env python3
# -*- coding: utf-8 -*-
"""
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"""
# Importing the libraries
from PIL import Image
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd

# Reading the images in numpy array
label, dataset = [], []
for i in range(1,21):
    for j in range(72):
        try:
            image =
Image.open('/home/forbidden_devil/Downloads/coil-20-
proc/obj'+str(i)+'__'+str(j)+'.png')
            image = image.convert('L')
            image = np.array(image)
            dataset.append(list(image.flatten())+[1])
            label.append(i)
        except IOError:
            continue
dataset = np.array(dataset)

# Splitting the dataset into the Training set and Test set
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(dataset,
label, test_size = 0.25, random_state = 0)

# Fitting Logistic Regression to the Training set
from sklearn.linear_model import LogisticRegression
classifier = LogisticRegression(random_state = 0)
classifier.fit(X_train, y_train)

# Predicting the Test set results
y_pred = classifier.predict(X_test)

# Making the Confusion Matrix
from sklearn.metrics import confusion_matrix
cm = confusion_matrix(y_test, y_pred)

# Calculating the accuracy
from sklearn.metrics import accuracy_score
print(accuracy_score(y_pred, y_test)*100)
```

### Output:

99.44444444444444