Logistic Regression Assignment

We are interested in the below variables which help in deciding whether the pain is normal or abnor mal. (after opening dataset rename columns in the below sequence)

Pelvis Incidence
Pelvic Tilt
Lumbar Lordosis Angle
Sacral Slope
Pelvic Radius
Spondylolisthesis Degree
Pelvic Slope
Direct Tilt
Thoracic Slope
Cervical Tilt
Sacrum Angle
Scoliosis Slope
Outcome

This dataset has binary response variable called **outcome.** There are 12 predictor variables. We will t reat all the variables as continuous.

1. Import and check the shape of data
2. Rename each column with the names given in this document
3. Create a heatmap
4. Use describe() to understand the distribution of data
5. take outcome attribute as target attribute
6. Import standardscaler and standardize the data.
7. Split the data in to train and test data in different ratio from 60:40 to 80:20
8. Apply logistic regression to predict is the pain normal or abnormal.
9. Check the relevant metrics and plot confusion matrix.

Eg: code for accuracy & confusion matrix

```
from sklearn import metrics

metrics.accuracy_score(yTest, y_log_pred_test)

metrics.confusion_matrix(yTest, y_log_pred_test)
```

Sample output

84.267

predicted values of target attribute of test data by your model.

Sample output

```
array([[64,  3],
       [10, 16]])
```

Actual values of target attribute of test data

Solutions to this question paper will be uploaded on lms after 2 days