

$$R^2 = \frac{\sum_{i=1}^n (y_i - \hat{y}_i)^2}{\sum_{i=1}^n (y_i - \bar{y})^2} \quad \text{SS}_{\text{Res}} \quad \text{SS}_{\text{tot}}$$

Logistic Regression:-

Logistic Regression is used to determine the categorical data (yes or no / True or false / 0 or 1) etc. used. Result (discrete) [Linear Regression for continuous data]

Step ①

import train-test-split

define the features of x and y

x =

y =

Step ②

import train-test-split

$x_{train}, x_{test}, y_{train}, y_{test} = train_test_split$
($x, y, test_size = 0.3, RandomState = 1$)

Step ③ :-

Input Logistic Regression

from sklearn.linear_model import LogisticRegression

This to fit x_{train} and y_{train} into the model

Logmodel = LogisticRegression()

Logmodel.fit(x_{train}, y_{train}).

Step ④ :-

Prediction :-

prediction = Logmodel.predict(y_{test})

Step ⑤ :- Report :-

from sklearn.metrics import classification_report

classification_report($y_{test}, prediction$.)

Step ⑥: accuracy score :-

from sklearn.metrics import confusion_matrix

confusion_matrix($y_{test}, prediction$)

from sklearn.metrics import accuracy_score

accuracy_score($y_{test}, prediction$).