Model Practical Examination

Reg No: 39110636

Branch: CSE

Subject Code: SCSA2601

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semester: IV sem

Subject Name: Machine learning & Data Analyticalak

Batch-id: ML-7

No. of pages: 7

An

1 Aim

To write a python code to find the Least Common Multiple among ten given two numbers.

Algorithm:

stepl: Start

step 2: Start the function LCM by calling the two variables

Step 3: check if the first knumber is greater than second number, if yes copy the first number to greater, else goto step 603.1

stepthe step 3.1: Copy the second number to greater

step 4: Start a while loop for True

step 4.1: check if greater % a is 0 and greater x b is D

step 4.2: copy greater to LCM and break

step 4.3: increment greater by I

step 5: return LCM

```
step 6: yet the input from the user
step 7: Call the function and print LCM
8tep 8: Stop
Program:
 def LCM (a, b):
      if a>b:
       greater = a
     else;
      greater = b
    while (True):
        if ((greater / a = =0) and (greater / b ==0)):
             1cm = greater
          break
     greater t=1
   return Lem
a = int (input ())
b=int (input ())
print ("The L.C.M. is , LCM(a, b))
Output:
 The output is attached below.
Result:
The above program is executed the and the output is verified.
```

2 Aim:

To Evaluate the results of markine learning algorithm
Read Actual values vs Predicted Values from the user
Compute the following

- A) Confusion Matrix
- B) Accuracy
- c) Specificity
- D) Sensi tivity
- E) Precision
- F) Recall
- a) Mis classification Error

Algorithm:

stepl: Start

step2: Input the file Y into program

step 3, predict the y

Step 4: Initialize the TP, TN, FP, FN as 'O'

step 5: Using the for loop Calculate the Confusion-matrix

step 6: Calculate the Accuracy, precision, Recall classification error, and specificity

step 7: print the result ACC, PRE, REC, SN, SP & MCB step 8: Stop

```
Program:
1,1,00
7',0',1',0']
j=0
TP, TN, FP, FN= 0,0,0,0
for iwin y:
    if i == i' and y-pred [j] == i':
       TP += 1
    dif i = = '0' and y-pred [j] = '0':
      TN+=1
   @if i == '1' and y-pred [j] == '0':
      FP+=1
    if i = = 'o' and y-pred [j] == '1':
      F N+=1
    j+=1
Confusion_matrix = [TP, TN, FP, FN]
print ('A) Confusion Matrix: ', confusion_matrix)
ACC = (TP+TN)/(TP+FP+TN+FN)
prind ('B) Accuracy: ', Acc)
SP = TN/(TN+FP)
print ('c) specificity: 1, sp)
SN = TP/(TP+FN)
print ('D) Sensitivity: ', SN)
```

PREC = TP/(TP+FP)
print (" E) Precision: ", PREC)

REC=TP/(TP4FN)

print (F) Recall: 1, REC)

MCE = 1-ACC

print ('G) Missclassification Error: 1, MCE)

Result.

The above program is executed successfully and the output is verified.

Output: The output is attached below

Output Screen Shot:

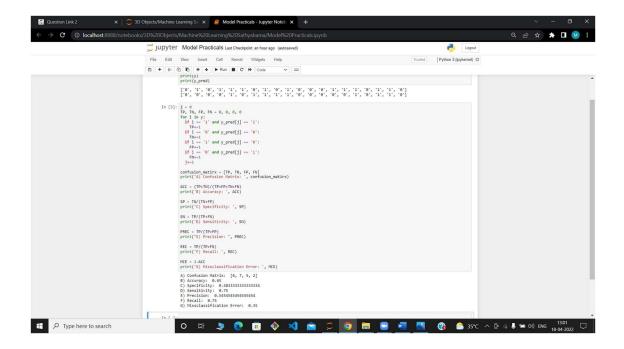
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1) Write python code to find the Least Common Multiple among given two numbers



2) Evaluating the Results of Machine Learning Algorithms Read Actual values Vs Predicted Values from the User. Compute the following:

- **A) Confusion Matrix**
- **B)** Accuracy
- C) Specificity
- D) Sensitivity
- **E) Precision**
- F) Recall
- **G) Misclassification Error**



A) Confusion Matrix: [6, 7, 5, 2]

B) Accuracy: 0.65

C) Specificity: 0.58333333333333334

D) Sensitivity: 0.75

E) Precision: 0.54545454545454

F) Recall: 0.75

G) Missclassification Error: 0.35