LAB ASSIGNMENT 6

Find-S-Algorithm

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Question:

Implement the Find-S algorithm using C/C++/Python (You are not allowed to use any library function related to the FIND-S algorithm). You are free to use your own data set for training and testing. You need to submit the code, training and testing data set and the results.

Code:

import csv  
num\_attributes=6  
A=[]  
print("\nThe given traininig dataset is\n")  
  
with open('finds.csv')as csvfile:  
 reader=csv.reader(csvfile)  
 for i in reader:  
 A.append(i)  
 print(i)  
  
print("\nThe inintial value of hypothesis : ")  
hypothesis=['0']\*num\_attributes  
print(hypothesis)  
  
start\_index=0  
  
for i in range(len(A)):  
 if A[i][-1]=='True':  
 start\_index=i  
 break  
  
  
for j in range(0,num\_attributes):  
 hypothesis[j]=A[start\_index][j]  
  
print('\nFind S: Finding a maximally specific hypothesis\n')  
for i in range(0,len(A)):  
 if A[i][-1]=="True":  
 for j in range(0,num\_attributes):  
 if hypothesis[j]!=A[i][j]:  
 hypothesis[j]='?'  
 else:  
 hypothesis[j]=A[i][j]  
  
 print('For training set instance ',i,' hypothesis : ',hypothesis)  
  
print('\n The maximally specific hypothesis for the given training examples : \n')  
print(hypothesis)

Output:

