CS 6301 - Machine Learning Lab

Date: 06.02.23

Instructions:

1. For exercises and spot you write the results obtained, plots and inferences (what do u understand from the results).

2. Write your own functions (instead of packages) for the algorithms to get full mark.

Week 3:

1**. Find-S algorithm**

Consider the following data set having the data about which particular seeds are poisonous. Implement Find-S algorithm for the following data and print the intermediate results?

S.No	Color	Toughness	Fungus	Appearance	Poisonous
1	Green	Hard	No	Wrinkled	Yes
2	Green	Hard	Yes	Smooth	No
3	Brown	Soft	No	Wrinkled	No
4	Orange	Hard	No	Wrinkled	Yes
5	Green	Soft	Yes	Smooth	Yes
6	Green	Hard	Yes	Wrinkled	Yes
7	Orange	Hard	No	Wrinkled	Yes

2. Candidate Elimination Algorithm

The bank wants to decide whether or not an individual should be given a bank loan or not. Implemen candidate elimination algorithm to find the decision?

State	Account Type	Education	Employment	Application	Y/N
MP	*NA*	*Bachelor*	*Employed*	*Online*	*Y*
MP	*Savings*	*Doctorate*	*Unemployed*	*Offline*	*N*
MP	*Savings*	*Bachelor*	*Employed*	*Online*	*Y*
MH	*Current*	*Master*	*Employed*	*Online*	*N*
MP	*NA*	*Doctorate*	*Employed*	*Online*	*Y*
MP	*Savings*	*Doctorate*	*Unemployed*	*Online*	*Y*
MP	*NA*	*Master*	*Unemployed*	*Offline*	*N*

Classify the example = {MP, Current. Bachelor, Unemployed, Online}

3. Add some inconsistent data to question 1, and check the performance of Find-s algorithm. Compare accuracy and error-rate of Find-S and Candidate Algorithms?

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Spot question

1. Implement multilevel candidate elimination algorithm?

a) Traffic Light Detection system based on position of traffic lights and non-traffic lights?

//By eliminating non-traffic lights at different levels

b) For your own dataset