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Machine Learning Lab

Week-4

Aim i) Find-S algorithm

To implement the find-s algorithm and find the most specific hypothesis that fits all the positive examples of a given data set.

Algorithm

Let h be the final hypothesis

i) Load the dataset

ii) Initialize 'h' with the first positive example

iii) Now consider all the positive examples, if you come across a negative example, then skip and move to the next positive example.

iv) Now check if each attribute in the example is equal to hypothesis value

v) If the value matches, no changes are made.

vi) If the value does not match, change it to '?'.

vii) Repeat steps 3-6 until the last positive example in the data set is reached.

2) Candidate elimination algorithm

Aim:-

To implement the candidate elimination algorithm and find the general and specific hypothesis that fits all the examples of a given data set.

Algorithm

Let G be general hypothesis and S be specific hypothesis

i) Load the data set

ii) Initalize G and S

iii) For each training example check if it is negative or positive

iv) If it is a positive example, then check if attribute value is equal to hypothesis value.

v) If it is not equal, replace attribute value with '?'

vi) If it is a ~~natic~~ negative example make G more specific.