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Expt. Title Implement the candidate elimination Inductive learning algorithm.
Class F.Y.MCA Batch B-4 Performed on

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Remarks Returned on

* Candidate - Elimination Algorithm.

The candidate elimination algorithm incrementally builds the version space given a hypothesis space H and a set E of example.

Algorithm:-

Step 1:- Load Data set

Step 2:- Initialize General Hypothesis and Specific hypothesis.

Step 3:- For each training example.

Step 4:- IF example is positive example
if attribute-value = hypothesis-value:
Do nothing
else:

replace attribute value with 'P'
(Basically generalize it)

Step 5:- IF example is negative
make generalize hypothesis more specific.

Example

Sky	Temp	Humid	wind	water	Forest	output.
Sunny	Warm	Normal	Strong	warm	same	Yes
Sunny	warm	high	Strong	warm	same	Yes.
rainy	cold	high	strong	warm	change	No
Sunny	warm	high	strong	cool	change	yes

complete for :
Algorithm
Flow Chart
Programme Listing
Results
Comments

Initially:-

$G_1 = [[?, ?, ?, ?, ?, ?], [?, ?, ?, ?, ?, ?], [?, ?, ?, ?, ?, ?]]$
 $S = [?, ?, ?, ?, ?, ?]$

$S = [Null, Null, Null, Null, Null, Null]$

For instance 1:-

<'sunny', 'warm', 'Normal', 'strong', 'warm', 'same'>
and positive output

$G_1 = G_1$

$S_1 = ['sunny', 'warm', 'Normal', 'strong', 'warm', 'same']$

For instance 2:-

<'sunny', 'warm', 'high', 'strong', 'warm', 'same'>
and positive output.

$G_2 = G_1$

$S_2 = ['sunny', 'warm', ?, 'strong', 'warm', 'same']$

For instance 3:-

<'rainy', 'cold', 'high', 'strong', 'warm', 'change'> and negative output.

$G_3 = [['sunny', ?, ?, ?, ?], [?, 'warm', ?, ?, ?],$

$[?, ?, ?, ?, ?], [?, ?, ?, ?, ?], [?, ?, ?, ?, ?]$

$[?, ?, ?, ?, ?]$

$S_3 = S_2$

For instance 4 = <'sunny', 'warm', 'high', 'strong', 'cool', 'change'>

$G_4 = G_3$

$S_4 = ['sunny', 'warm', ?, 'strong', ?, ?]$

At last by synchronizing the G_4 & S_4 algorithm procedure the output.

output

$G_1 = [['sunny', ?, ?, ?, ?], [?, 'warm', ?, ?, ?],$

$S = ['sunny', 'warm', ?, 'strong', ?, ?]$