

Practical 7

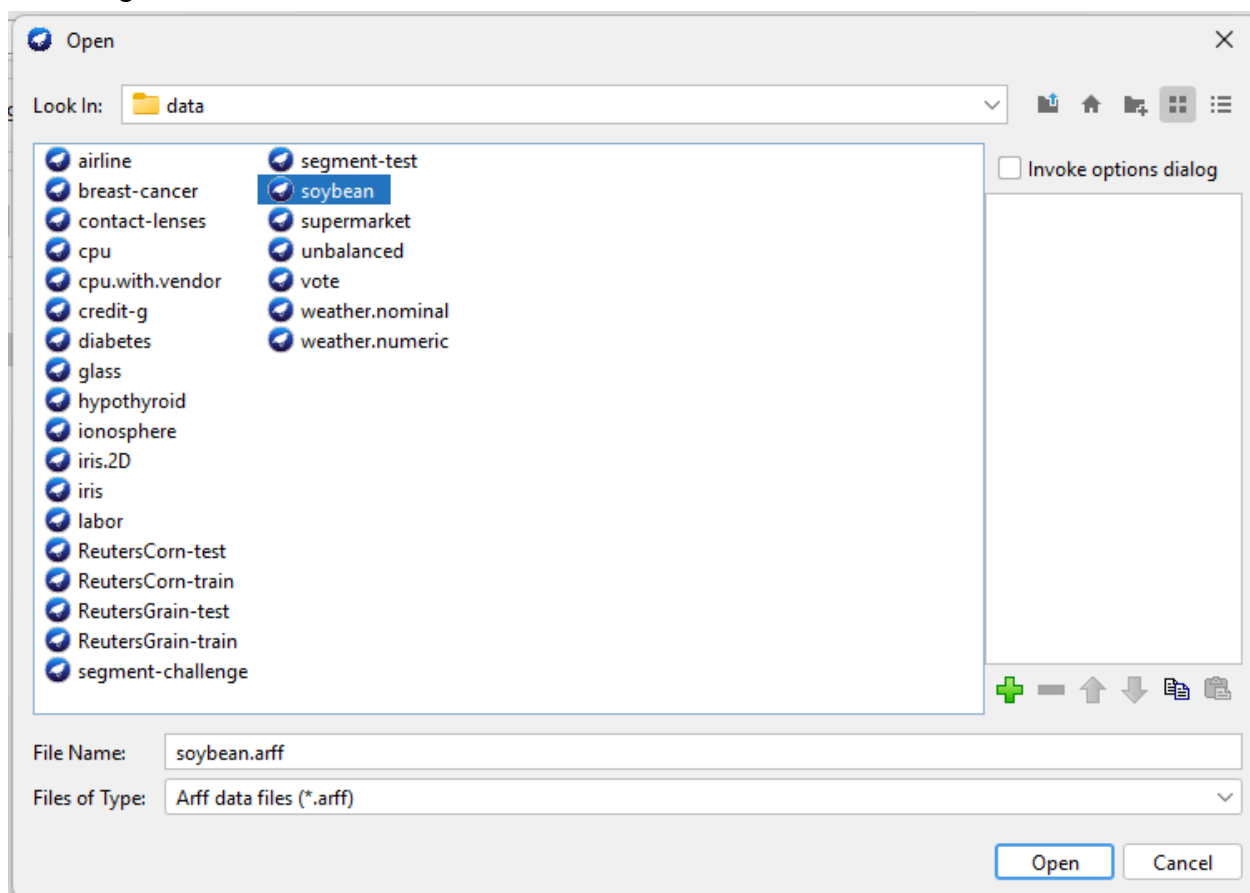
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Roll No.:34

Batch: B2

Aim: Perform classification data mining using DECISION TREE APPROACH in WEKA DATA MINING TOOL.

Selecting the Dataset:



Preprocessing the Dataset:

Weka Explorer

Preprocess Classify Cluster Associate Select attributes Visualize

Open file... Open URL... Open DB... Generate... Undo Edit... Save...

Filter
Choose **None** Apply Stop

Current relation
Relation: soybean
Instances: 683
Attributes: 36
Sum of weights: 683

Attributes
All None Invert Pattern

No.	Name
1	<input checked="" type="checkbox"/> date
2	<input checked="" type="checkbox"/> plant-stand
3	<input checked="" type="checkbox"/> precip
4	<input checked="" type="checkbox"/> temp
5	<input checked="" type="checkbox"/> hail
6	<input checked="" type="checkbox"/> crop-hist
7	<input checked="" type="checkbox"/> area-damaged
8	<input checked="" type="checkbox"/> severity
9	<input checked="" type="checkbox"/> seed-tmt
10	<input checked="" type="checkbox"/> germination
11	<input checked="" type="checkbox"/> plant-growth
12	<input checked="" type="checkbox"/> leaves
13	<input checked="" type="checkbox"/> leafspots-halo
14	<input checked="" type="checkbox"/> leafspots-marg
15	<input checked="" type="checkbox"/> leafspot-size
16	<input checked="" type="checkbox"/> leaf-shread
17	<input checked="" type="checkbox"/> leaf-malf
18	<input checked="" type="checkbox"/> leaf-mild
19	<input checked="" type="checkbox"/> stem

Remove

Selected attribute
Name: date
Missing: 1 (0%)
Distinct: 7
Type: Nominal
Unique: 0 (0%)

No.	Label	Count	Weight
1	april	26	26
2	may	75	75
3	june	93	93
4	july	118	118
5	august	131	131
6	september	149	149
7	october	90	90

Class: class (Nom) Visualize All

Status
OK Log x 0

Matrix:

Weka Explorer

Preprocess

Classify

Cluster

Associate

Select attributes

Visualize

Classifier

Choose J48 -C 0.25 -M 2

Test options

☒ Use training set

☐ Supplied test set

☐ Cross-validation

☐ Percentage split

Set...

Folds 10

% 66

More options...

(Nom) class

Start

Stop

Result list (right-click for options)

11:19:35 - trees.J48

Classifier output

	0.850	0.000	1.000	0.850	0.919	0.920	0.999	0.958	phyllosticta
	0.967	0.017	0.898	0.967	0.931	0.921	0.995	0.939	alternaria
	0.890	0.008	0.942	0.890	0.915	0.903	0.994	0.963	frog-eye-leaf-spot
	1.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000	diaporthe-leaf-spot
	1.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000	cyst-nematode
	1.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000	2-4-d-injury
	0.500	0.000	1.000	0.500	0.667	0.705	1.000	1.000	herbicide-injury
Weighted Avg.	0.963	0.005	0.965	0.963	0.962	0.959	0.998	0.979	


=== Confusion Matrix ===

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	<-- classified as
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	a = diaporthe-stem-canker
0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	b = charcoal-rot
1	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	c = rhizoctonia-root-rot
0	0	0	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	d = phytophthora-rot
0	0	0	0	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	e = brown-stem-rot
0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	f = powdery-mildew
0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	g = downy-mildew
0	0	0	0	0	0	0	90	0	0	0	0	0	0	2	0	0	0	0	h = brown-spot
0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	i = bacterial-blight
0	0	0	0	0	0	0	0	1	19	0	0	0	0	0	0	0	0	0	j = bacterial-pustule
0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	k = purple-seed-stain
0	0	0	1	0	0	0	0	0	0	0	43	0	0	0	0	0	0	0	l = anthracnose
0	0	0	0	0	0	0	3	0	0	0	0	17	0	0	0	0	0	0	m = phyllosticta-leaf-spot
0	0	0	0	0	0	0	0	0	0	0	0	0	88	3	0	0	0	0	n = alternaria-leaf-spot
0	0	0	0	0	0	0	0	0	0	0	0	0	10	81	0	0	0	0	o = frog-eye-leaf-spot
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	p = diaporthe-pod-and-stem-blight
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	q = cyst-nematode
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	r = 2-4-d-injury
0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	s = herbicide-injury

Status

OK

Log

 x 0

Decision Tree:

