

## 1. Bagging [ Tree depth : 3 Total Trees/Bags : 5 ]

Accuracy of the model with Ensemble Type : bag, Depth : 3 and total Trees : 5 for file agaricuslepiota.test is **76.659000%**

%%%%%%%% Confusion Matrix %%%%%%%%%

<b>A=0</b>	<b>B=1</b>	<b>&lt;----- predicted class</b>
1597	496	<b>A = 0</b>
0	32	<b>B = 1</b>

Misclassification Rate = 23.300000 %

True positive rate (TPR) = 100.000000 %

True Negative rate (TNR) = 76.300000 %

## 2. Bagging [ Tree depth : 5 Total Trees/Bags : 5 ]

Accuracy of the model with Ensemble Type : bag , Depth : 5 and total Trees : 5 file agaricuslepiota.test is 76.659000%

%%%%%%%% Confusion Matrix %%%%%%%%%

<b>A=0</b>	<b>B=1</b>	<b>&lt;----- predicted class</b>
1597	496	<b>A = 0</b>
0	32	<b>B = 1</b>

Misclassification Rate = 23.300000 %

True positive rate (TPR) = 100.000000 %

True Negative rate (TNR) = 76.300000 %

### 3. Bagging [ Tree depth : 3 Total Trees/Bags : 10 ]

Accuracy of the model with Ensemble Type : bag, Depth : 3 and total Trees : 10 for file agaricuslepiota.test is 76.659000%

%%%%%%%%%% Confusion Matrix %%%%%%%%%%

A=0	B=1	<----- predicted class
1597	496	A = 0
0	32	B = 1

Misclassification Rate = 23.300000 %

True positive rate (TPR) = 100.000000 %

True Negative rate (TNR) = 76.300000 %

### 4. Bagging [ Tree depth : 5 Total Trees/Bags : 10 ]

Accuracy of the model with Ensemble Type : bag, Depth : 5 and total Trees : 10 for file agaricuslepiota.test is **76.659000%**

%%%%%%%%%% Confusion Matrix %%%%%%%%%%

A=0	B=1	<----- predicted class
1597	496	A = 0
0	32	B = 1

Misclassification Rate = 23.300000 %

True positive rate (TPR) = 100.000000 %

True Negative rate (TNR) = 76.300000 %

## 5. Boosting [ Tree depth : 1    Total Trees : 5 ]

Accuracy of the model with Ensemble Type : Boost, Depth : 1 and total Trees : 5 for file agaricuslepiota.test is 76.659000%

%%%%%%%%%%%% Confusion Matrix %%%%%%%%%%%%%%

<b>A=0</b>	<b>B=1</b>	<b>&lt;----- predicted class</b>
1597	496	<b>A = 0</b>
0	32	<b>B = 1</b>

Misclassification Rate = 23.300000 %

True positive rate (TPR) = 100.000000 %

True Negative rate (TNR) = 76.300000 %

## 6. Boosting [ Tree depth : 2    Total Trees : 5 ]

Accuracy of the model with Ensemble Type : Boost, Depth : 2 and total Trees : 5 for file agaricuslepiotatest1.csv is 98.118000%

%%%%%%%%%%%% Confusion Matrix %%%%%%%%%%%%%%

<b>A=0</b>	<b>B=1</b>	<b>&lt;----- predicted class</b>
2085	8	<b>A = 0</b>
32	0	<b>B = 1</b>

Misclassification Rate = 1.900000 %  
True positive rate (TPR) = 0.000000 %  
True Negative rate (TNR) = 99.600000 %

## 7. Boosting [ Tree depth : 1 Total Trees : 10 ]

Accuracy of the model with Ensemble Type : Boost, Depth : 1 and total Trees : 10 for file agaricuslepiotatest1.csv is **76.659000%**

%%%%%%%%%% Confusion Matrix %%%%%%%%%%

A=0	B=1	<----- predicted class
1597	496	A = 0
0	32	B = 1

Misclassification Rate = 23.300000 %  
True positive rate (TPR) = 100.000000 %  
True Negative rate (TNR) = 76.300000 %

## 8. Boosting [ Tree depth : 2 Total Trees : 10 ]

Accuracy of the model with Ensemble Type : Boost, Depth 2 and total Trees : 10 for file agaricuslepiotatest1.csv is **98.118000%**

%%%%%%%%%% Confusion Matrix %%%%%%%%%%

A=0	B=1	<----- predicted class
2085	8	A = 0
32	0	B = 1

Misclassification Rate = 1.900000 %

True positive rate (TPR) = 0.000000 %

True Negative rate (TNR) = 99.600000 %

# WEKA Output

=== Run information ===

Scheme: weka.classifiers.misc.InputMappedClassifier -I -trim -W weka.classifiers.meta.Bagging -- -P 100 -S 1 -num-slots 1 -I 10 -W weka.classifiers.trees.REPTree -- -M 2 -V 0.001 -N 3 -S 1 -L -1 -I 0.0

Relation: agaricuslepoitatrain-weka.filters.unsupervised.attribute.NumericToNominal-Rfirst-last

Instances: 6000

Attributes: 126

[list of attributes omitted]

Test mode: user supplied test set: size unknown (reading incrementally)

=== Classifier model (full training set) ===

InputMappedClassifier:

Bagging with 10 iterations and base learner

weka.classifiers.trees.REPTree -M 2 -V 0.001 -N 3 -S 1 -L -1 -I 0.0

Attribute mappings:

## Model attributes

-----

(nominal) cap-shape-bell

(nominal) cap-shape-conical

(nominal) cap-shape-convex

(nominal) cap-shape-flat

(nominal) cap-shape-knobbed

(nominal) cap-shape-sunken

(nominal) cap-surface-fibrous

(nominal) cap-surface-grooves

(nominal) cap-surface-scaly

(nominal) cap-surface-smooth

(nominal) cap-color-brown

(nominal) cap-color-buff

(nominal) cap-color-cinnamon

(nominal) cap-color-gray

(nominal) cap-color-green

(nominal) cap-color-pink

(nominal) cap-color-purple

(nominal) cap-color-red

(nominal) cap-color-white

(nominal) cap-color-yellow

(nominal) bruises?-bruises

(nominal) odor-almond

(nominal) odor-anise

(nominal) odor-creosote

(nominal) odor-fishy

(nominal) odor-foul

(nominal) odor-musty

## Incoming attributes

-----

--> 1 (nominal) cap-shape-bell

--> 2 (nominal) cap-shape-conical

--> 3 (nominal) cap-shape-convex

--> 4 (nominal) cap-shape-flat

--> 5 (nominal) cap-shape-knobbed

--> 6 (nominal) cap-shape-sunken

--> 7 (nominal) cap-surface-fibrous

--> 8 (nominal) cap-surface-grooves

--> 9 (nominal) cap-surface-scaly

--> 10 (nominal) cap-surface-smooth

--> 11 (nominal) cap-color-brown

--> 12 (nominal) cap-color-buff

--> 13 (nominal) cap-color-cinnamon

--> 14 (nominal) cap-color-gray

--> 15 (nominal) cap-color-green

--> 16 (nominal) cap-color-pink

--> 17 (nominal) cap-color-purple

--> 18 (nominal) cap-color-red

--> 19 (nominal) cap-color-white

--> 20 (nominal) cap-color-yellow

--> 21 (nominal) bruises?-bruises

--> 22 (nominal) odor-almond

--> 23 (nominal) odor-anise

--> 24 (nominal) odor-creosote

--> 25 (nominal) odor-fishy

--> 26 (nominal) odor-foul

--> 27 (nominal) odor-musty

(nominal) odor-none	--> 28 (nominal) odor-none
(nominal) odor-pungent	--> 29 (nominal) odor-pungent
(nominal) odor-spicy	--> 30 (nominal) odor-spicy
(nominal) gill-attachment-attached	--> 31 (nominal) gill-attachment-attached
(nominal) gill-attachment-descending	--> 32 (nominal) gill-attachment-descending
(nominal) gill-attachment-free	--> 33 (nominal) gill-attachment-free
(nominal) gill-attachment-notched	--> 34 (nominal) gill-attachment-notched
(nominal) gill-spacing-close	--> 35 (nominal) gill-spacing-close
(nominal) gill-spacing-crowded	--> 36 (nominal) gill-spacing-crowded
(nominal) gill-spacing-distant	--> 37 (nominal) gill-spacing-distant
(nominal) gill-size-broad	--> 38 (nominal) gill-size-broad
(nominal) gill-size-narrow	--> 39 (nominal) gill-size-narrow
(nominal) gill-color-black	--> 40 (nominal) gill-color-black
(nominal) gill-color-brown	--> 41 (nominal) gill-color-brown
(nominal) gill-color-buff	--> 42 (nominal) gill-color-buff
(nominal) gill-color-chocolate	--> 43 (nominal) gill-color-chocolate
(nominal) gill-color-gray	--> 44 (nominal) gill-color-gray
(nominal) gill-color-green	--> 45 (nominal) gill-color-green
(nominal) gill-color-orange	--> 46 (nominal) gill-color-orange
(nominal) gill-color-pink	--> 47 (nominal) gill-color-pink
(nominal) gill-color-purple	--> 48 (nominal) gill-color-purple
(nominal) gill-color-red	--> 49 (nominal) gill-color-red
(nominal) gill-color-white	--> 50 (nominal) gill-color-white
(nominal) gill-color-yellow	--> 51 (nominal) gill-color-yellow
(nominal) stalk-shape-enlarging	--> 52 (nominal) stalk-shape-enlarging
(nominal) stalk-shape-tapering	--> 53 (nominal) stalk-shape-tapering
(nominal) stalk-root-bulbous	--> 54 (nominal) stalk-root-bulbous
(nominal) stalk-root-club	--> 55 (nominal) stalk-root-club
(nominal) stalk-root-cup	--> 56 (nominal) stalk-root-cup

(nominal) stalk-root-equal	--> 57 (nominal) stalk-root-equal
(nominal) stalk-root-rhizomorphs	--> 58 (nominal) stalk-root-rhizomorphs
(nominal) stalk-root-rooted	--> 59 (nominal) stalk-root-rooted
(nominal) stalk-root-missing	--> 60 (nominal) stalk-root-missing
(nominal) stalk-surface-above-ring-fibrous	--> 61 (nominal) stalk-surface-above-ring-fibrous
(nominal) stalk-surface-above-ring-scaly	--> 62 (nominal) stalk-surface-above-ring-scaly
(nominal) stalk-surface-above-ring-silky	--> 63 (nominal) stalk-surface-above-ring-silky
(nominal) stalk-surface-above-ring-smooth	--> 64 (nominal) stalk-surface-above-ring-smooth
(nominal) stalk-surface-below-ring-fibrous	--> 65 (nominal) stalk-surface-below-ring-fibrous
(nominal) stalk-surface-below-ring-scaly	--> 66 (nominal) stalk-surface-below-ring-scaly
(nominal) stalk-surface-below-ring-silky	--> 67 (nominal) stalk-surface-below-ring-silky
(nominal) stalk-surface-below-ring-smooth	--> 68 (nominal) stalk-surface-below-ring-smooth
(nominal) stalk-color-above-ring-brown	--> 69 (nominal) stalk-color-above-ring-brown
(nominal) stalk-color-above-ring-buff	--> 70 (nominal) stalk-color-above-ring-buff
(nominal) stalk-color-above-ring-cinnamon	--> 71 (nominal) stalk-color-above-ring-cinnamon
(nominal) stalk-color-above-ring-gray	--> 72 (nominal) stalk-color-above-ring-gray
(nominal) stalk-color-above-ring-orange	--> 73 (nominal) stalk-color-above-ring-orange
(nominal) stalk-color-above-ring-pink	--> 74 (nominal) stalk-color-above-ring-pink
(nominal) stalk-color-above-ring-red	--> 75 (nominal) stalk-color-above-ring-red
(nominal) stalk-color-above-ring-white	--> 76 (nominal) stalk-color-above-ring-white
(nominal) stalk-color-above-ring-yellow	--> 77 (nominal) stalk-color-above-ring-yellow
(nominal) stalk-color-below-ring-brown	--> 78 (nominal) stalk-color-below-ring-brown
(nominal) stalk-color-below-ring-buff	--> 79 (nominal) stalk-color-below-ring-buff
(nominal) stalk-color-below-ring-cinnamon	--> 80 (nominal) stalk-color-below-ring-cinnamon
(nominal) stalk-color-below-ring-gray	--> 81 (nominal) stalk-color-below-ring-gray
(nominal) stalk-color-below-ring-orange	--> 82 (nominal) stalk-color-below-ring-orange
(nominal) stalk-color-below-ring-pink	--> 83 (nominal) stalk-color-below-ring-pink
(nominal) stalk-color-below-ring-red	--> 84 (nominal) stalk-color-below-ring-red
(nominal) stalk-color-below-ring-white	--> 85 (nominal) stalk-color-below-ring-white



(nominal) stalk-color-below-ring-yellow	--> 86 (nominal) stalk-color-below-ring-yellow
(nominal) veil-type-partial	--> 87 (nominal) veil-type-partial
(nominal) veil-type-universal	--> 88 (nominal) veil-type-universal
(nominal) veil-color-brown	--> 89 (nominal) veil-color-brown
(nominal) veil-color-orange	--> 90 (nominal) veil-color-orange
(nominal) veil-color-white	--> 91 (nominal) veil-color-white
(nominal) veil-color-yellow	--> 92 (nominal) veil-color-yellow
(nominal) ring-number-none	--> 93 (nominal) ring-number-none
(nominal) ring-number-one	--> 94 (nominal) ring-number-one
(nominal) ring-number-two	--> 95 (nominal) ring-number-two
(nominal) ring-type-cobwebby	--> 96 (nominal) ring-type-cobwebby
(nominal) ring-type-evanescent	--> 97 (nominal) ring-type-evanescent
(nominal) ring-type-flaring	--> 98 (nominal) ring-type-flaring
(nominal) ring-type-large	--> 99 (nominal) ring-type-large
(nominal) ring-type-none	--> 100 (nominal) ring-type-none
(nominal) ring-type-pendant	--> 101 (nominal) ring-type-pendant
(nominal) ring-type-sheathing	--> 102 (nominal) ring-type-sheathing
(nominal) ring-type-zone	--> 103 (nominal) ring-type-zone
(nominal) spore-print-color-black	--> 104 (nominal) spore-print-color-black
(nominal) spore-print-color-brown	--> 105 (nominal) spore-print-color-brown
(nominal) spore-print-color-buff	--> 106 (nominal) spore-print-color-buff
(nominal) spore-print-color-chocolate	--> 107 (nominal) spore-print-color-chocolate
(nominal) spore-print-color-green	--> 108 (nominal) spore-print-color-green
(nominal) spore-print-color-orange	--> 109 (nominal) spore-print-color-orange
(nominal) spore-print-color-purple	--> 110 (nominal) spore-print-color-purple
(nominal) spore-print-color-white	--> 111 (nominal) spore-print-color-white
(nominal) spore-print-color-yellow	--> 112 (nominal) spore-print-color-yellow
(nominal) population-abundant	--> 113 (nominal) population-abundant
(nominal) population-clustered	--> 114 (nominal) population-clustered

(nominal) population-numerous	--> 115 (nominal) population-numerous
(nominal) population-scattered	--> 116 (nominal) population-scattered
(nominal) population-several	--> 117 (nominal) population-several
(nominal) population-solitary	--> 118 (nominal) population-solitary
(nominal) habitat-grasses	--> 119 (nominal) habitat-grasses
(nominal) habitat-leaves	--> 120 (nominal) habitat-leaves
(nominal) habitat-meadows	--> 121 (nominal) habitat-meadows
(nominal) habitat-paths	--> 122 (nominal) habitat-paths
(nominal) habitat-urban	--> 123 (nominal) habitat-urban
(nominal) habitat-waste	--> 124 (nominal) habitat-waste
(nominal) habitat-woods	--> 125 (nominal) habitat-woods
(nominal) poisonous	--> 126 (nominal) poisonous

Time taken to build model: 1.27 seconds

=== Evaluation on test set ===

Time taken to test model on supplied test set: 0.27 seconds

=== Summary ===

Correctly Classified Instances	1593	74.9647 %
Incorrectly Classified Instances	532	25.0353 %
Kappa statistic	0.0812	
Mean absolute error	0.2504	
Root mean squared error	0.5004	
Relative absolute error	45.0609 %	
Root relative squared error	90.0298 %	

Total Number of Instances        2125

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.746	0.000	1.000	0.746	0.854	0.206	0.873	0.996	0
	1.000	0.254	0.057	1.000	0.107	0.206	0.873	0.057	1
Weighted Avg.	0.750	0.004	0.986	0.750	0.843	0.206	0.873	0.982	

=== Confusion Matrix ===

```
a  b  <-- classified as
1561 532 |  a = 0
0  32 |  b = 1
```

```
|||||
|||||
```

=== Run information ===

Scheme:    weka.classifiers.misc.InputMappedClassifier -I -trim -W weka.classifiers.meta.AdaBoostM1 -  
- -P 100 -S 1 -I 10 -W weka.classifiers.trees.DecisionStump

Relation:    agaricuslepoitatrain-weka.filters.unsupervised.attribute.NumericToNominal-Rfirst-last

Instances:    6000

Attributes:    126

          [list of attributes omitted]

Test mode:    user supplied test set: size unknown (reading incrementally)

=== Classifier model (full training set) ===

InputMappedClassifier:

AdaBoostM1: Base classifiers and their weights:

Decision Stump

Classifications

ring-type-pendant = 0 : 0

ring-type-pendant != 0 : 1

ring-type-pendant is missing : 1

Class distributions

ring-type-pendant = 0

0	1
---	---

0.925	0.075
-------	-------

ring-type-pendant != 0

0	1
---	---

0.08372093023255814	0.9162790697674419
---------------------	--------------------

ring-type-pendant is missing

0	1
---	---

0.44266666666666665	0.5573333333333333
---------------------	--------------------

Weight: 2.44

Decision Stump

## Classifications

gill-size-broad = 0 : 0

gill-size-broad != 0 : 1

gill-size-broad is missing : 0

## Class distributions

gill-size-broad = 0

0	1
---	---

0.9094567404426556	0.09054325955734452
--------------------	---------------------

gill-size-broad != 0

0	1
---	---

0.2921857304643336	0.7078142695356664
--------------------	--------------------

gill-size-broad is missing

0	1
---	---

0.5144927536231906	0.4855072463768095
--------------------	--------------------

Weight: 1.27

## Decision Stump

## Classifications

stalk-surface-above-ring-smooth = 0 : 0

stalk-surface-above-ring-smooth != 0 : 1

stalk-surface-above-ring-smooth is missing : 0

## Class distributions

stalk-surface-above-ring-smooth = 0

0      1

0.9770242774274274   0.022975722572572688

stalk-surface-above-ring-smooth != 0

0      1

0.4404126362631463   0.5595873637368537

stalk-surface-above-ring-smooth is missing

0      1

0.6355847283892667   0.3644152716107333

Weight: 0.9

## Decision Stump

### Classifications

ring-number-one = 0 : 1

ring-number-one != 0 : 0

ring-number-one is missing : 0

## Class distributions

ring-number-one = 0

0      1

0.0      1.0

ring-number-one != 0

0      1

0.8106594465149118   0.18934055348508813

ring-number-one is missing

0      1

0.7352744190616733   0.26472558093832665

Weight: 1.57

Decision Stump

Classifications

ring-type-pendant = 0 : 0

ring-type-pendant != 0 : 1

ring-type-pendant is missing : 1

Class distributions

ring-type-pendant = 0

0      1

0.8170812627253697   0.18291873727463026

ring-type-pendant != 0

0      1

0.28603508029924923   0.7139649197007508

ring-type-pendant is missing

0      1

0.4438633514685619   0.5561366485314382

Weight: 1.07

Decision Stump

Classifications

odor-creosote = 0 : 1

odor-creosote != 0 : 0

odor-creosote is missing : 0

Class distributions

odor-creosote = 0

0	1
---	---

0.3989205732188056	0.6010794267811944
--------------------	--------------------

odor-creosote != 0

0	1
---	---

1.0	0.0
-----	-----

odor-creosote is missing

0	1
---	---

0.5566303136271901	0.4433696863728099
--------------------	--------------------

Weight: 0.87

Decision Stump



## Classifications

gill-color-white = 1 : 1

gill-color-white != 1 : 0

gill-color-white is missing : 0

## Class distributions

gill-color-white = 1

0      1

0.037798573617570226      0.9622014263824298

gill-color-white != 1

0      1

0.7640127895261258   0.23598721047387422

gill-color-white is missing

0      1

0.6858863409008307   0.3141136590991693

Weight: 1.3

## Decision Stump

## Classifications

cap-surface-fibrous = 1 : 0

cap-surface-fibrous != 1 : 1

cap-surface-fibrous is missing : 1

## Class distributions

cap-surface-fibrous = 1

0	1
---	---

0.7237867852944497	0.2762132147055504
--------------------	--------------------

cap-surface-fibrous != 1

0	1
---	---

0.2579893866898242	0.7420106133101758
--------------------	--------------------

cap-surface-fibrous is missing

0	1
---	---

0.4435669500381783	0.5564330499618216
--------------------	--------------------

Weight: 1.02

## Decision Stump

### Classifications

odor-creosote = 0 : 1

odor-creosote != 0 : 0

odor-creosote is missing : 1

## Class distributions

odor-creosote = 0

0	1
---	---

0.39729600797747255	0.6027039920225273
---------------------	--------------------

odor-creosote != 0

0 1

1.0 0.0

odor-creosote is missing

0 1

0.48879414646600694 0.5112058535339932

Weight: 0.68

Decision Stump

Classifications

ring-type-pendant = 0 : 0

ring-type-pendant != 0 : 1

ring-type-pendant is missing : 0

Class distributions

ring-type-pendant = 0

0 1

0.8614166348952604 0.13858336510473948

ring-type-pendant != 0

0 1

0.43997470472348754 0.5600252952765125

ring-type-pendant is missing

0 1

0.6144860294037353 0.38551397059626474

Weight: 0.78

Number of performed Iterations: 10

Attribute mappings:

Model attributes	Incoming attributes
-----	-----
(nominal) cap-shape-bell	--> 1 (nominal) cap-shape-bell
(nominal) cap-shape-conical	--> 2 (nominal) cap-shape-conical
(nominal) cap-shape-convex	--> 3 (nominal) cap-shape-convex
(nominal) cap-shape-flat	--> 4 (nominal) cap-shape-flat
(nominal) cap-shape-knobbed	--> 5 (nominal) cap-shape-knobbed
(nominal) cap-shape-sunken	--> 6 (nominal) cap-shape-sunken
(nominal) cap-surface-fibrous	--> 7 (nominal) cap-surface-fibrous
(nominal) cap-surface-grooves	--> 8 (nominal) cap-surface-grooves
(nominal) cap-surface-scaly	--> 9 (nominal) cap-surface-scaly
(nominal) cap-surface-smooth	--> 10 (nominal) cap-surface-smooth
(nominal) cap-color-brown	--> 11 (nominal) cap-color-brown
(nominal) cap-color-buff	--> 12 (nominal) cap-color-buff
(nominal) cap-color-cinnamon	--> 13 (nominal) cap-color-cinnamon
(nominal) cap-color-gray	--> 14 (nominal) cap-color-gray
(nominal) cap-color-green	--> 15 (nominal) cap-color-green
(nominal) cap-color-pink	--> 16 (nominal) cap-color-pink
(nominal) cap-color-purple	--> 17 (nominal) cap-color-purple
(nominal) cap-color-red	--> 18 (nominal) cap-color-red
(nominal) cap-color-white	--> 19 (nominal) cap-color-white
(nominal) cap-color-yellow	--> 20 (nominal) cap-color-yellow

(nominal) bruises?-bruises	--> 21 (nominal) bruises?-bruises
(nominal) odor-almond	--> 22 (nominal) odor-almond
(nominal) odor-anise	--> 23 (nominal) odor-anise
(nominal) odor-creosote	--> 24 (nominal) odor-creosote
(nominal) odor-fishy	--> 25 (nominal) odor-fishy
(nominal) odor-foul	--> 26 (nominal) odor-foul
(nominal) odor-musty	--> 27 (nominal) odor-musty
(nominal) odor-none	--> 28 (nominal) odor-none
(nominal) odor-pungent	--> 29 (nominal) odor-pungent
(nominal) odor-spicy	--> 30 (nominal) odor-spicy
(nominal) gill-attachment-attached	--> 31 (nominal) gill-attachment-attached
(nominal) gill-attachment-descending	--> 32 (nominal) gill-attachment-descending
(nominal) gill-attachment-free	--> 33 (nominal) gill-attachment-free
(nominal) gill-attachment-notched	--> 34 (nominal) gill-attachment-notched
(nominal) gill-spacing-close	--> 35 (nominal) gill-spacing-close
(nominal) gill-spacing-crowded	--> 36 (nominal) gill-spacing-crowded
(nominal) gill-spacing-distant	--> 37 (nominal) gill-spacing-distant
(nominal) gill-size-broad	--> 38 (nominal) gill-size-broad
(nominal) gill-size-narrow	--> 39 (nominal) gill-size-narrow
(nominal) gill-color-black	--> 40 (nominal) gill-color-black
(nominal) gill-color-brown	--> 41 (nominal) gill-color-brown
(nominal) gill-color-buff	--> 42 (nominal) gill-color-buff
(nominal) gill-color-chocolate	--> 43 (nominal) gill-color-chocolate
(nominal) gill-color-gray	--> 44 (nominal) gill-color-gray
(nominal) gill-color-green	--> 45 (nominal) gill-color-green
(nominal) gill-color-orange	--> 46 (nominal) gill-color-orange
(nominal) gill-color-pink	--> 47 (nominal) gill-color-pink
(nominal) gill-color-purple	--> 48 (nominal) gill-color-purple
(nominal) gill-color-red	--> 49 (nominal) gill-color-red

(nominal) gill-color-white	--> 50 (nominal) gill-color-white
(nominal) gill-color-yellow	--> 51 (nominal) gill-color-yellow
(nominal) stalk-shape-enlarging	--> 52 (nominal) stalk-shape-enlarging
(nominal) stalk-shape-tapering	--> 53 (nominal) stalk-shape-tapering
(nominal) stalk-root-bulbous	--> 54 (nominal) stalk-root-bulbous
(nominal) stalk-root-club	--> 55 (nominal) stalk-root-club
(nominal) stalk-root-cup	--> 56 (nominal) stalk-root-cup
(nominal) stalk-root-equal	--> 57 (nominal) stalk-root-equal
(nominal) stalk-root-rhizomorphs	--> 58 (nominal) stalk-root-rhizomorphs
(nominal) stalk-root-rooted	--> 59 (nominal) stalk-root-rooted
(nominal) stalk-root-missing	--> 60 (nominal) stalk-root-missing
(nominal) stalk-surface-above-ring-fibrous	--> 61 (nominal) stalk-surface-above-ring-fibrous
(nominal) stalk-surface-above-ring-scaly	--> 62 (nominal) stalk-surface-above-ring-scaly
(nominal) stalk-surface-above-ring-silky	--> 63 (nominal) stalk-surface-above-ring-silky
(nominal) stalk-surface-above-ring-smooth	--> 64 (nominal) stalk-surface-above-ring-smooth
(nominal) stalk-surface-below-ring-fibrous	--> 65 (nominal) stalk-surface-below-ring-fibrous
(nominal) stalk-surface-below-ring-scaly	--> 66 (nominal) stalk-surface-below-ring-scaly
(nominal) stalk-surface-below-ring-silky	--> 67 (nominal) stalk-surface-below-ring-silky
(nominal) stalk-surface-below-ring-smooth	--> 68 (nominal) stalk-surface-below-ring-smooth
(nominal) stalk-color-above-ring-brown	--> 69 (nominal) stalk-color-above-ring-brown
(nominal) stalk-color-above-ring-buff	--> 70 (nominal) stalk-color-above-ring-buff
(nominal) stalk-color-above-ring-cinnamon	--> 71 (nominal) stalk-color-above-ring-cinnamon
(nominal) stalk-color-above-ring-gray	--> 72 (nominal) stalk-color-above-ring-gray
(nominal) stalk-color-above-ring-orange	--> 73 (nominal) stalk-color-above-ring-orange
(nominal) stalk-color-above-ring-pink	--> 74 (nominal) stalk-color-above-ring-pink
(nominal) stalk-color-above-ring-red	--> 75 (nominal) stalk-color-above-ring-red
(nominal) stalk-color-above-ring-white	--> 76 (nominal) stalk-color-above-ring-white
(nominal) stalk-color-above-ring-yellow	--> 77 (nominal) stalk-color-above-ring-yellow
(nominal) stalk-color-below-ring-brown	--> 78 (nominal) stalk-color-below-ring-brown

(nominal) stalk-color-below-ring-buff	--> 79 (nominal) stalk-color-below-ring-buff
(nominal) stalk-color-below-ring-cinnamon	--> 80 (nominal) stalk-color-below-ring-cinnamon
(nominal) stalk-color-below-ring-gray	--> 81 (nominal) stalk-color-below-ring-gray
(nominal) stalk-color-below-ring-orange	--> 82 (nominal) stalk-color-below-ring-orange
(nominal) stalk-color-below-ring-pink	--> 83 (nominal) stalk-color-below-ring-pink
(nominal) stalk-color-below-ring-red	--> 84 (nominal) stalk-color-below-ring-red
(nominal) stalk-color-below-ring-white	--> 85 (nominal) stalk-color-below-ring-white
(nominal) stalk-color-below-ring-yellow	--> 86 (nominal) stalk-color-below-ring-yellow
(nominal) veil-type-partial	--> 87 (nominal) veil-type-partial
(nominal) veil-type-universal	--> 88 (nominal) veil-type-universal
(nominal) veil-color-brown	--> 89 (nominal) veil-color-brown
(nominal) veil-color-orange	--> 90 (nominal) veil-color-orange
(nominal) veil-color-white	--> 91 (nominal) veil-color-white
(nominal) veil-color-yellow	--> 92 (nominal) veil-color-yellow
(nominal) ring-number-none	--> 93 (nominal) ring-number-none
(nominal) ring-number-one	--> 94 (nominal) ring-number-one
(nominal) ring-number-two	--> 95 (nominal) ring-number-two
(nominal) ring-type-cobwebby	--> 96 (nominal) ring-type-cobwebby
(nominal) ring-type-evanescent	--> 97 (nominal) ring-type-evanescent
(nominal) ring-type-flaring	--> 98 (nominal) ring-type-flaring
(nominal) ring-type-large	--> 99 (nominal) ring-type-large
(nominal) ring-type-none	--> 100 (nominal) ring-type-none
(nominal) ring-type-pendant	--> 101 (nominal) ring-type-pendant
(nominal) ring-type-sheathing	--> 102 (nominal) ring-type-sheathing
(nominal) ring-type-zone	--> 103 (nominal) ring-type-zone
(nominal) spore-print-color-black	--> 104 (nominal) spore-print-color-black
(nominal) spore-print-color-brown	--> 105 (nominal) spore-print-color-brown
(nominal) spore-print-color-buff	--> 106 (nominal) spore-print-color-buff
(nominal) spore-print-color-chocolate	--> 107 (nominal) spore-print-color-chocolate

(nominal) spore-print-color-green	--> 108 (nominal) spore-print-color-green
(nominal) spore-print-color-orange	--> 109 (nominal) spore-print-color-orange
(nominal) spore-print-color-purple	--> 110 (nominal) spore-print-color-purple
(nominal) spore-print-color-white	--> 111 (nominal) spore-print-color-white
(nominal) spore-print-color-yellow	--> 112 (nominal) spore-print-color-yellow
(nominal) population-abundant	--> 113 (nominal) population-abundant
(nominal) population-clustered	--> 114 (nominal) population-clustered
(nominal) population-numerous	--> 115 (nominal) population-numerous
(nominal) population-scattered	--> 116 (nominal) population-scattered
(nominal) population-several	--> 117 (nominal) population-several
(nominal) population-solitary	--> 118 (nominal) population-solitary
(nominal) habitat-grasses	--> 119 (nominal) habitat-grasses
(nominal) habitat-leaves	--> 120 (nominal) habitat-leaves
(nominal) habitat-meadows	--> 121 (nominal) habitat-meadows
(nominal) habitat-paths	--> 122 (nominal) habitat-paths
(nominal) habitat-urban	--> 123 (nominal) habitat-urban
(nominal) habitat-waste	--> 124 (nominal) habitat-waste
(nominal) habitat-woods	--> 125 (nominal) habitat-woods
(nominal) poisonous	--> 126 (nominal) poisonous

Time taken to build model: 0.33 seconds

=== Evaluation on test set ===

Time taken to test model on supplied test set: 0.12 seconds

=== Summary ===



Correctly Classified Instances	1611	75.8118 %
Incorrectly Classified Instances	514	24.1882 %
Kappa statistic	0.0847	
Mean absolute error	0.2452	
Root mean squared error	0.4889	
Relative absolute error	44.1395 %	
Root relative squared error	87.9716 %	
Total Number of Instances	2125	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.754	0.000	1.000	0.754	0.860	0.210	0.994	1.000	0
	1.000	0.246	0.059	1.000	0.111	0.210	0.994	0.571	1
Weighted Avg.	0.758	0.004	0.986	0.758	0.849	0.210	0.994	0.993	

=== Confusion Matrix ===

```

a   b  <-- classified as
1579 514 |  a = 0
0    32 |  b = 1

```

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