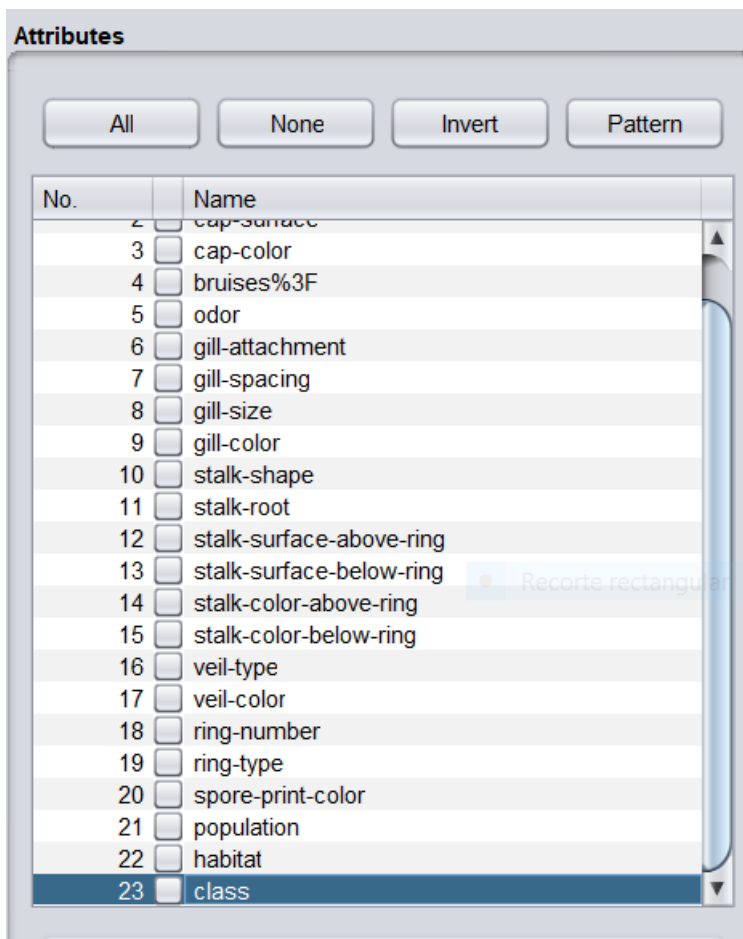


### 1. ¿Cuántos atributos tiene cada muestra?

Cada muestra tiene 22 atributos + el identificador de la clase.



No.	Name
2	cap-surface
3	cap-color
4	bruises%3F
5	odor
6	gill-attachment
7	gill-spacing
8	gill-size
9	gill-color
10	stalk-shape
11	stalk-root
12	stalk-surface-above-ring
13	stalk-surface-below-ring
14	stalk-color-above-ring
15	stalk-color-below-ring
16	veil-type
17	veil-color
18	ring-number
19	ring-type
20	spore-print-color
21	population
22	habitat
23	class

### 2. ¿Cuántas clases hay en total y cuántas muestras hay de cada una?

Hay 2 clases:

- **e**: 504 muestras
- **p**: 51 muestras



3. ¿Cuáles son los posibles valores del atributo cap-shape?

b, c, f, k, s, x.

**Selected attribute**

Name: cap-shape      Type: Nominal  
Missing: 0 (0%)      Distinct: 4      Unique: 0 (0%)

No.	Label	Count	Weight
1	b	129	129.0
2	c	0	0.0
3	f	122	122.0
4	k	0	0.0
5	s	17	17.0
6	x	287	287.0

4. ¿Cuál es la tasa de aciertos de un algoritmo KNN para  $k = 3$  y utilizado validación cruzada para  $n = 10$ ? Añade captura donde se vea la configuración.

La tasa de aciertos con esta configuración es del **100%**.

Weka Explorer

Preprocess Classify Cluster Associate Select attributes Visualize

Classifier

Choose IBk -K 3 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A "weka.core.EuclideanDistance -R first-last"

Test options

☐ Use training set

☐ Supplied test set

☒ Cross-validation Folds 10

☐ Percentage split % 66

(Nom) class

Result list (right-click for options)

11:23:05 - lazy IBk

Classifier output

```

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

IBk instance-based classifier
using 3 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

=== Stratified cross-validation ===
=== Summary ===

Correctly Classified Instances      555      100 %
Incorrectly Classified Instances      0
Kappa statistic                    1
Mean absolute error                 0.0004
Root mean squared error             0.0005
Relative absolute error             0.2549 %
Root relative squared error         0.1595 %
Total Number of Instances          555

=== Detailed Accuracy By Class ===

          TP Rate  FP Rate  Precision  Recall  F-Measure  MDC   ROC Area  FRC Area  Class
          1.000    0.000    1.000    1.000    1.000    1.000    1.000    1.000    e
          1.000    0.000    1.000    1.000    1.000    1.000    1.000    1.000    p
Weighted Avg.   1.000    0.000    1.000    1.000    1.000    1.000    1.000    1.000

=== Confusion Matrix ===
      a  b  <-- classified as
504  0  |  a = e
  0 51  |  b = p

```

weka.gui.GenericObjectEditor

weka.classifiers.lazy.IBk

About

K-nearest neighbours classifier

KNN 3

batchSize 100

crossValidate False

debug False

distanceWeighting No distance weighting

doNotCheckCapabilities False

meanSquared False

nearestNeighbourSearchAlgorithm Choose LinearNNSearch -A "weka.core.EuclideanDistance" -R first-last

numDecimalPlaces 2

windowSize 0

Status

OK

5. ¿Cuál es la tasa de acierto de un algoritmo Naive Bayes utilizando validación cruzada para  $n = 10$ ? Añade captura donde se vea la configuración.

También será del 100%.

Weka Explorer

Preprocess Classify Cluster Associate Select attributes Visualize

Classifier

Choose NaiveBayes

Test options

☐ Use training set

☐ Supplied test set

☒ Cross-validation Folds 10

☐ Percentage split % 66

(Nom) class

Result list (right-click for options)

11:23:05 - lazy IBk

11:25:48 - trees.J48

11:26:10 - bayes.NaiveBayes

Classifier output

```

l          1.0  1.0
m          137.0  1.0
p          52.0  1.0
u          54.0  27.0
w          1.0  1.0
[total]    511.0  58.0

Time taken to build model: 0 seconds

=== Stratified cross-validation ===
=== Summary ===

Correctly Classified Instances      555      100 %
Incorrectly Classified Instances      0
Kappa statistic                    1
Mean absolute error                 0.0015
Root mean squared error             0.0122
Relative absolute error             0.8692 %
Root relative squared error         4.2402 %
Total Number of Instances          555

=== Detailed Accuracy By Class ===

          TP Rate  FP Rate  Precision  Recall  F-Measure  MDC   ROC Area  FRC Area  Class
          1.000    0.000    1.000    1.000    1.000    1.000    1.000    1.000    e
          1.000    0.000    1.000    1.000    1.000    1.000    1.000    1.000    p
Weighted Avg.   1.000    0.000    1.000    1.000    1.000    1.000    1.000    1.000

=== Confusion Matrix ===
      a  b  <-- classified as
504  0  |  a = e
  0 51  |  b = p

```

Status

OK