Bayesian Networks - Example - Bayes
Bayesian Networks - Example - Bayes

=== Summary ===

LogScore Bayes: -617.3064606012264
LogScore MDL: -981.5452630207427
LogScore ENTROPY: -644.6414652913313
LogScore AIC: -790.6414652913314

Correctly Classified Instances 96 95.0495 %
Incorrectly Classified Instances 5 4.9505 %
Kappa statistic 0.9348
Mean absolute error 0.0178
Root mean squared error 0.0943
Relative absolute error 8.13 %
Root relative squared error 28.6128 %
Total Number of Instances 101

=== Confusion Matrix ===

    a   b    c    d   e    f    g      <-- classified as
a 41  0    0    0   0    0    0     | a = mammal
b  0  20   0    0   0    0    0     | b = bird
  0   0   4    0   1    0    0     | c = reptile
  0   0   0   13  0    0    0     | d = fish
  0   0   0    0   4    0    0     | e = amphibian
  0   0   0    0   0    6    2     | f = insect
  0   0   1    0   0    1    8     | g = invertebrate
Bayesian Networks - Example - MDL

- Type
  - Hair
  - Feathers
  - Eggs
  - Milk
  - Airborne
  - Aquatic
  - Toothed
  - Backbone
  - Breathes
  - Fins
  - Venomous
  - Catsize
  - Predator
  - Tail
  - Domestic
Bayesian Networks - Example - MDL

=== Summary ===

LogScore Bayes: -636.4004529447377  
LogScore MDL: -828.374485542587  
LogScore ENTROPY: -629.9243033184126  
LogScore AIC: -715.9243033184126

Correctly Classified Instances 92 91.0891 %  
Incorrectly Classified Instances 9 8.9109 %

Kappa statistic 0.8834
Mean absolute error 0.0313
Root mean squared error 0.1279
Relative absolute error 14.3017 %
Root relative squared error 38.821 %
Total Number of Instances 101

=== Confusion Matrix ===

<table>
<thead>
<tr>
<th></th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
<th>f</th>
<th>g</th>
<th>Total</th>
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</table>

Javier Béjar (LSI - FIB)
Bayesian Networks - Example - Entropy

=== Summary ===

LogScore Bayes: -647.0042479613486
LogScore MDL: -1302.2750438802946
LogScore ENTROPY: -723.0774190167174
LogScore AIC: -974.0774190167166

Correctly Classified Instances 93 92.0792 %
Incorrectly Classified Instances 8 7.9208 %
Kappa statistic 0.8955
Mean absolute error 0.0224
Root mean squared error 0.1196
Relative absolute error 10.2308 %
Root relative squared error 36.2919 %
Total Number of Instances 101

=== Confusion Matrix ===

<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
<th>f</th>
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<td>0</td>
<td>1</td>
<td>0</td>
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</tbody>
</table>

<-- classified as

a = mammal
b = bird
c = reptile
d = fish
e = amphibian
f = insect
g = invertebrate
Bayesian Networks - Example - AIC
Bayesian Networks - Example - AIC

=== Summary ===

LogScore Bayes: -627.8399998925489  
LogScore MDL: -870.0113504166138  
LogScore ENTROPY: -625.4099630240268  
LogScore AIC: -731.4099630240269

Correctly Classified Instances 92  91.0891 %
Incorrectly Classified Instances 9  8.9109 %
Kappa statistic 0.8829
Mean absolute error 0.0208
Root mean squared error 0.1109
Relative absolute error 9.4922 %
Root relative squared error 33.6515 %
Total Number of Instances 101

=== Confusion Matrix ===

a  b  c  d  e  f  g  <-- classified as
40  0  0  0  1  0  0 |  a  =  mammal
 0  20  0  0  0  0  0 |  b  =  bird
 0  1  3  1  0  0  0 |  c  =  reptile
 0  0  0  13  0  0  0 |  d  =  fish
 0  0  1  0  3  0  0 |  e  =  amphibian
 0  0  0  0  0  6  2 |  f  =  insect
 0  0  1  0  0  2  7 |  g  =  invertebrate