Titanic 3 параметра

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: relation
Instances: 2201

Attributes: 4
Sum of weights: 2201

Selected attribute

Name: survived
Missing: 0 (0%)

Distinct: 2

Type: Nominal
Unique: 0 (0%)

No.	Label	Count	Weight
1	yes	711	711.0
2	no	1490	1490.0

Attributes

All | None | Invert | Pattern
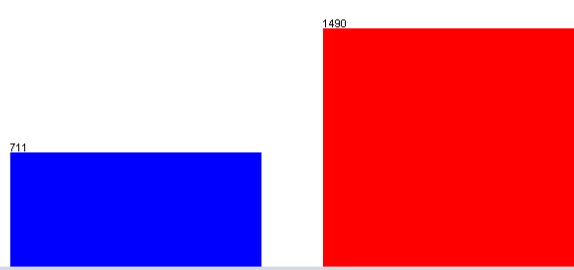
No.	Name
1	class
2	age
3	sex
4	survived

Remove

Class: survived (Nom) | Visualize All

Status

OK | Log | x 0
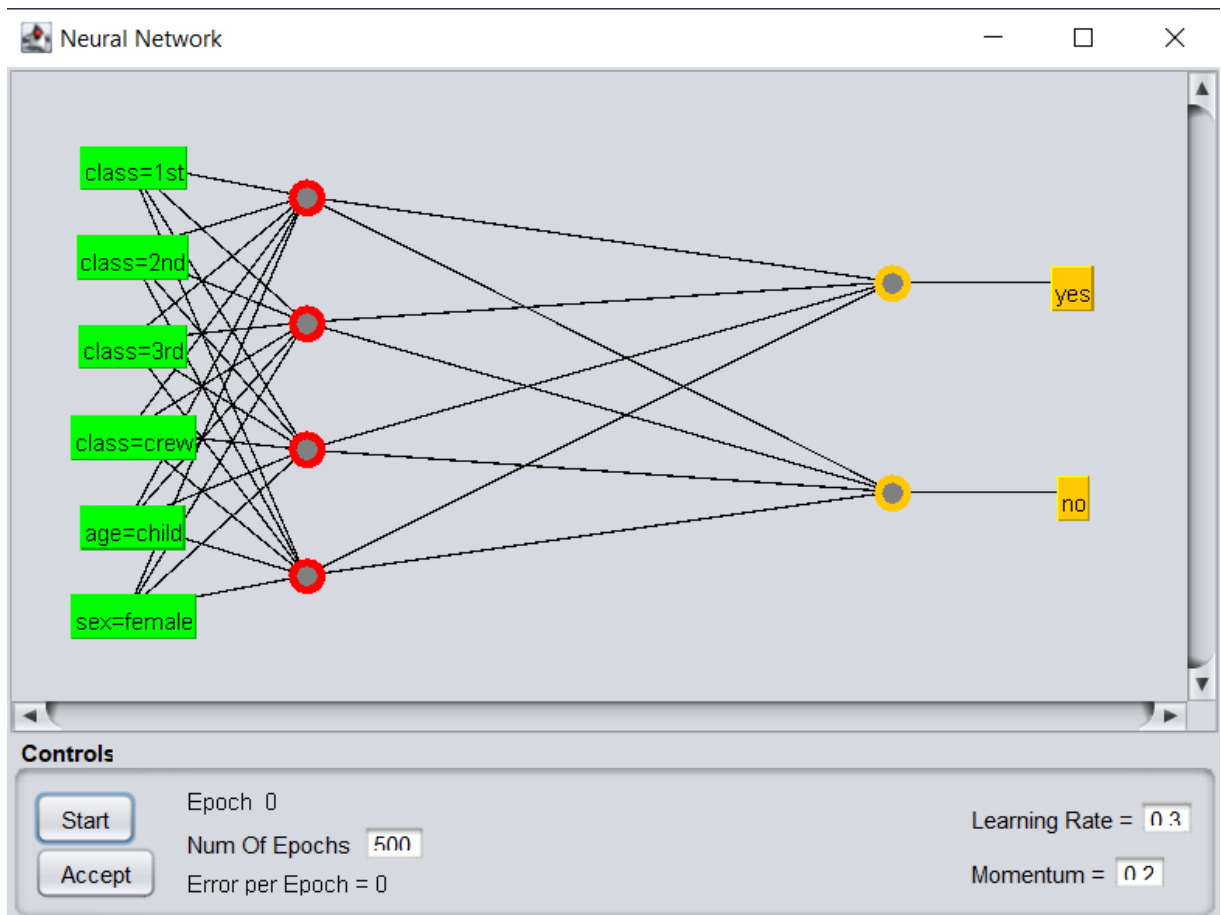
Neural Network

Controls

Start
Accept

Epoch 0
Num Of Epochs 500
Error per Epoch = 0

Learning Rate = 0.3
Momentum = 0.2

=== Run information ===

Scheme: weka.classifiers.functions.MultilayerPerceptron -L 0.3 -M 0.2 -N 500 -V 0 -S 0 -E 20 -H a -G -R
Relation: relation
Instances: 2201
Attributes: 4
          class
          age
          sex
          survived
Test mode: evaluate on training data

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

Sigmoid Node 0
    Inputs   Weights
    Threshold   4.401401927699589
    Node 2   -0.40255339192605194
    Node 3   -1.1718300174331955
    Node 4   -4.177344437330253
    Node 5   -2.3850067305821847
Sigmoid Node 1
    Inputs   Weights
    Threshold   -4.401401927699596
    Node 2   0.40255339192605183
    Node 3   1.1718300174331948
    Node 4   4.17734443733026
    Node 5   2.385006730582188
Sigmoid Node 2
    Inputs   Weights
    Threshold   -2.278578028884966
    Attrib class=1st   2.362824711331264
    Attrib class=2nd   0.2276753384783987
    Attrib class=3rd   2.1428830101766443
    Attrib class=crew   -0.17421067314483263
    Attrib age=child   0.6557403705924357
    Attrib sex=female   -3.802652752185458
Sigmoid Node 3
    Inputs   Weights
    Threshold   -3.52593003445517
    Attrib class=1st   -0.12878364755814695
    Attrib class=2nd   0.17936085325406048
    Attrib class=3rd   3.473935182869863
    Attrib class=crew   3.4862367333318214
    Attrib age=child   -2.241180325672059
    Attrib sex=female   -4.129486787834129
Sigmoid Node 4
    Inputs   Weights
    Threshold   0.9210426335169565
    Attrib class=1st   -2.746963682847665
    Attrib class=2nd   -3.4187826312201754
    Attrib class=3rd   5.800422560526519
    Attrib class=crew   -1.5780497108970621
    Attrib age=child   -4.566832085844144
    Attrib sex=female   -4.165986725360772

Sigmoid Node 5
    Inputs   Weights
    Threshold   -3.2146407101561043
    Attrib class=1st   1.1903010687619888
    Attrib class=2nd   5.187124694078265
    Attrib class=3rd   -0.28229445123233976
    Attrib class=crew   0.4947167207570416
    Attrib age=child   -3.147065121446262
    Attrib sex=female   -0.15777947280201648
Class yes
    Input
    Node 0
Class no
    Input
    Node 1

Time taken to build model: 21.68 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0.01 seconds

=== Summary ===

Correctly Classified Instances   1724   78.328 %
Incorrectly Classified Instances   477   21.672 %
Kappa statistic   0.4598
Mean absolute error   0.3407
Root mean squared error   0.4003
Relative absolute error   77.8953 %
Root relative squared error   85.6089 %
Total Number of Instances   2201

=== Detailed Accuracy By Class ===

          TP Rate FP Rate Precision Recall F-Measure MCC   ROC Area PRC Area Class
          0,506   0,085   0,741   0,506   0,602   0,475 0,768   0,674   yes
          0,915   0,494   0,795   0,915   0,851   0,475 0,768   0,829   no
Weighted Avg.   0,783   0,362   0,778   0,783   0,771   0,475 0,768   0,779

=== Confusion Matrix ===

   a   b   <-- classified as
 360 351 | a = yes
 126 1364 | b = no

Titanic_train_без2кавычек.csv

Убираем все ненужные атрибуты

=== Run information ===

Scheme: weka.classifiers.functions.MultilayerPerceptron -L 0.3 -M 0.2 -N 500 -V 0 -S 0 -E 20 -H a -G -R
Relation: titanic_train_без2кавычек-weka.filters.unsupervised.attribute.Remove-R1-
weka.filters.unsupervised.attribute.Remove-R3-weka.filters.unsupervised.attribute.Remove-R7-
weka.filters.unsupervised.attribute.Remove-R8-weka.filters.unsupervised.attribute.Remove-R5-6-
weka.filters.unsupervised.attribute.Remove-R5-weka.filters.unsupervised.attribute.Remove-R5
Instances: 891
Attributes: 4
         Survived
         Pclass
         Sex
         Age
Test mode: evaluate on training data

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

Linear Node 0
   Inputs   Weights
   Threshold   -0.1806064691809107
   Node 1   -1.4935487811433605
   Node 2   1.3627887728261265
Sigmoid Node 1
   Inputs   Weights
   Threshold   -4.8933978045779565
   Attrib Pclass   0.9990913610117612
   Attrib Sex=female   -4.3562246912579

Attrib Age   2.1500891021439577
Sigmoid Node 2
    Inputs   Weights
    Threshold   -2.035739682308306
    Attrib Pclass   -4.314548352166857
    Attrib Sex=female   3.3603295450204
    Attrib Age   -1.9785121472108544
Class
    Input
    Node 0

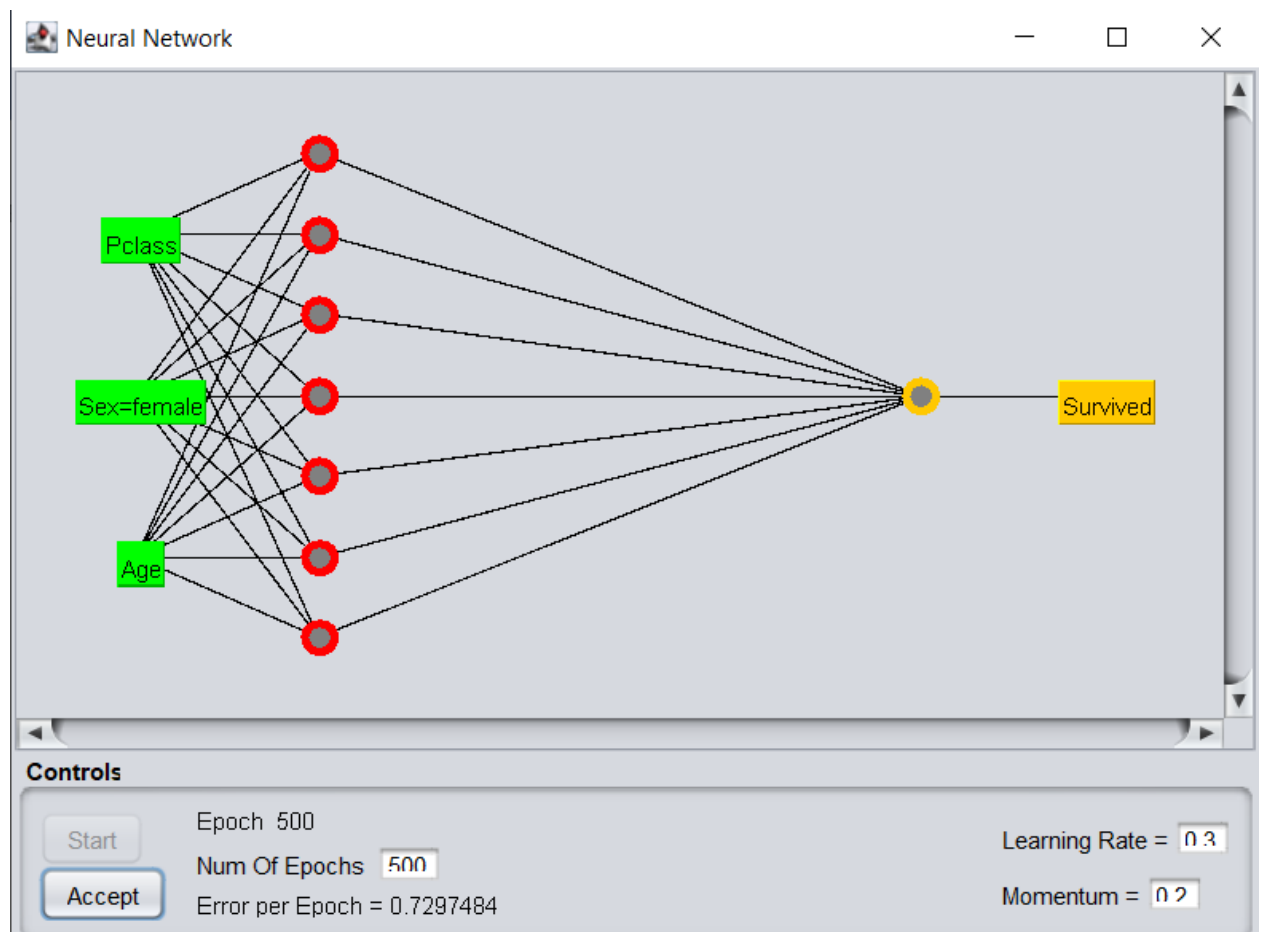Time taken to build model: 14.99 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0 seconds

=== Summary ===

Correlation coefficient   0.6337
Mean absolute error   0.2776
Root mean squared error   0.3829
Relative absolute error   58.6799 %
Root relative squared error   78.7385 %
Total Number of Instances   891

=== Run information ===

Scheme: weka.classifiers.functions.MultilayerPerceptron -L 0.3 -M 0.2 -N 500 -V 0 -S 0 -E 20 -H 7 -G -R
Relation: titanic_train_без2кавычек-weka.filters.unsupervised.attribute.Remove-R1-
weka.filters.unsupervised.attribute.Remove-R3-weka.filters.unsupervised.attribute.Remove-R7-
weka.filters.unsupervised.attribute.Remove-R8-weka.filters.unsupervised.attribute.Remove-R5-6-
weka.filters.unsupervised.attribute.Remove-R5-weka.filters.unsupervised.attribute.Remove-R5
Instances: 891
Attributes: 4
          Survived
          Pclass
          Sex
          Age
Test mode: evaluate on training data

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

Linear Node 0
   Inputs   Weights
   Threshold   -0.48845230977734316
   Node 1   1.0950465206868276
   Node 2   2.127399164713692
   Node 3   -2.2942192331915954
   Node 4   -2.2929417927378926
   Node 5   2.1276006471590674
   Node 6   2.1273091475732047
   Node 7   -2.294425738977959
Sigmoid Node 1
   Inputs   Weights
   Threshold   -4.307884024646734
   Attrib Pclass   -19.902913690248493
   Attrib Sex=female   8.561760927976469
   Attrib Age   -17.033511470638498
Sigmoid Node 2
   Inputs   Weights
   Threshold   -6.002689619191708
   Attrib Pclass   -0.24564290052836657
   Attrib Sex=female   3.5904531547276344
   Attrib Age   0.37089562571391077
Sigmoid Node 3
   Inputs   Weights
   Threshold   -5.987669915806933
   Attrib Pclass   -0.015138585907197378
   Attrib Sex=female   -3.2966245315821276
   Attrib Age   0.9194313748158106
Sigmoid Node 4
   Inputs   Weights
   Threshold   -5.980223861703634
   Attrib Pclass   -0.015172811312025391
   Attrib Sex=female   -3.2898775512218092
   Attrib Age   0.9195242684095358
Sigmoid Node 5
   Inputs   Weights

Threshold   -6.001232844582249
    Attrib Pclass   -0.24550220540104226
    Attrib Sex=female   3.5886432076979746
    Attrib Age   0.3702756388007201
Sigmoid Node 6
  Inputs   Weights
    Threshold   -6.00240544264518
    Attrib Pclass   -0.24567836648724634
    Attrib Sex=female   3.5902789832463133
    Attrib Age   0.3710502248630275
Sigmoid Node 7
  Inputs   Weights
    Threshold   -5.988886324180701
    Attrib Pclass   -0.01513303162560967
    Attrib Sex=female   -3.2977279860090762
    Attrib Age   0.9194163832262462
Class
  Input
  Node 0
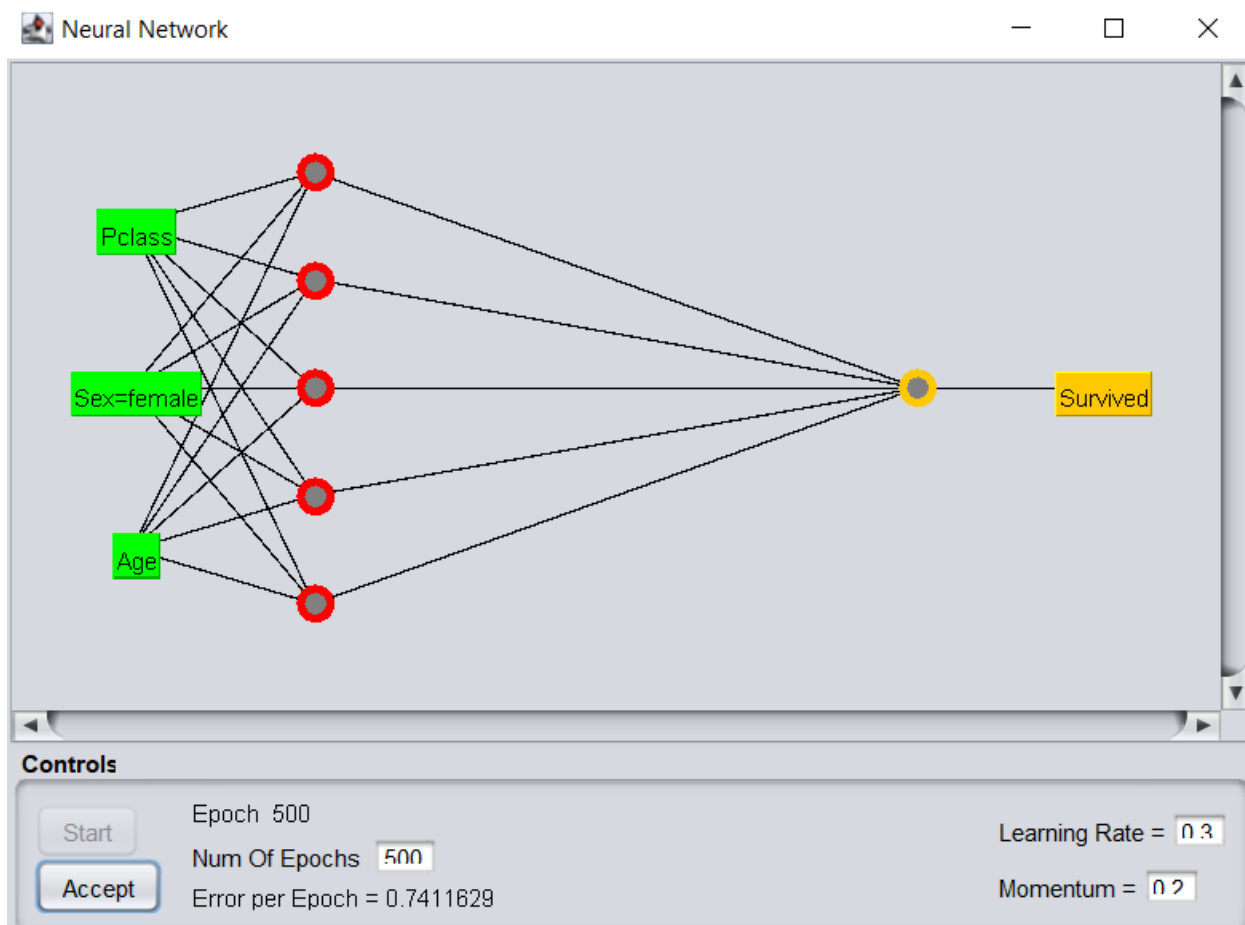

Time taken to build model: 26.67 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0.01 seconds

=== Summary ===

Correlation coefficient   0.6472
Mean absolute error   0.2634
Root mean squared error   0.3786
Relative absolute error   55.6776 %
Root relative squared error   77.8574 %
Total Number of Instances   891

=== Run information ===

Scheme: weka.classifiers.functions.MultilayerPerceptron -L 0.3 -M 0.2 -N 500 -V 0 -S 0 -E 20 -H 5 -G -R
Relation: titanic_train_без2кавычек-weka.filters.unsupervised.attribute.Remove-R1-
weka.filters.unsupervised.attribute.Remove-R3-weka.filters.unsupervised.attribute.Remove-R7-
weka.filters.unsupervised.attribute.Remove-R8-weka.filters.unsupervised.attribute.Remove-R5-6-
weka.filters.unsupervised.attribute.Remove-R5-weka.filters.unsupervised.attribute.Remove-R5
Instances: 891
Attributes: 4
          Survived
          Pclass
          Sex
          Age
Test mode: evaluate on training data

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

Linear Node 0
    Inputs   Weights
    Threshold   -0.48436148708306337
    Node 1   -1.821943145304757
    Node 2   1.6134790778935404
    Node 3   1.1028873494312832
    Node 4   -1.821953249582888
    Node 5   1.337584650919798
Sigmoid Node 1
    Inputs   Weights
    Threshold   -5.645757887354781

Attrib Pclass   0.007609362921439554
      Attrib Sex=female   -3.627795321985087
      Attrib Age   1.0529482401178187
Sigmoid Node 2
    Inputs   Weights
    Threshold   -5.787854761021211
    Attrib Pclass   -0.1447956139432651
    Attrib Sex=female   3.7474219394241115
    Attrib Age   -0.06903892864351302
Sigmoid Node 3
    Inputs   Weights
    Threshold   -4.288695366897878
    Attrib Pclass   -19.88034186368865
    Attrib Sex=female   8.643345313234944
    Attrib Age   -17.05515806790974
Sigmoid Node 4
    Inputs   Weights
    Threshold   -5.646125503911101
    Attrib Pclass   0.0076101730748245125
    Attrib Sex=female   -3.6281531956511417
    Attrib Age   1.052945166586224
Sigmoid Node 5
    Inputs   Weights
    Threshold   -5.358861812788962
    Attrib Pclass   -0.4110534396123926
    Attrib Sex=female   4.134634430777051
    Attrib Age   0.8543294821663356
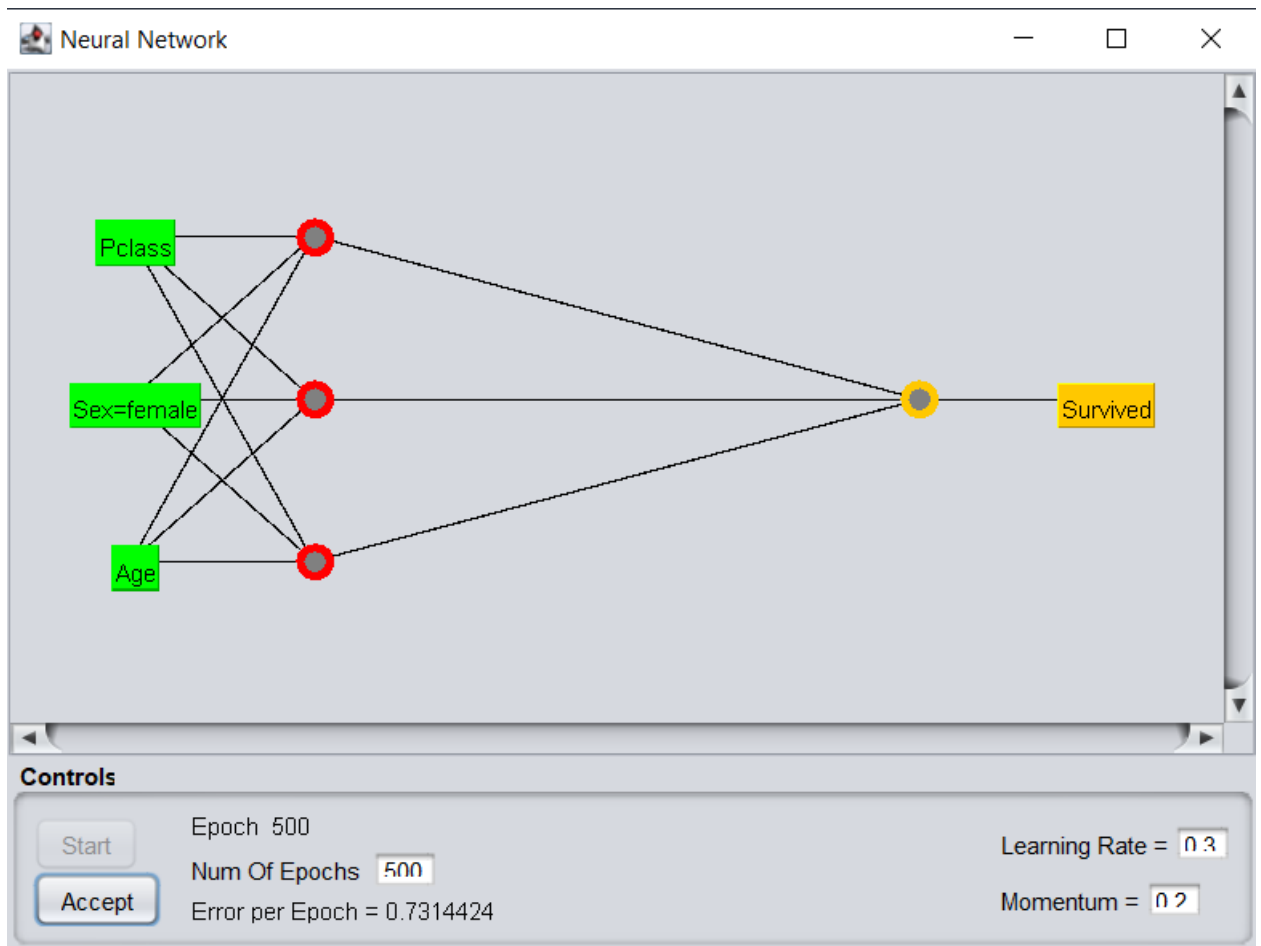Class
    Input
    Node 0

Time taken to build model: 45.16 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0 seconds

=== Summary ===

Correlation coefficient   0.6453
Mean absolute error   0.2634
Root mean squared error   0.3786
Relative absolute error   55.6915 %
Root relative squared error   77.8599 %
Total Number of Instances   891

=== Run information ===

Scheme: weka.classifiers.functions.MultilayerPerceptron -L 0.3 -M 0.2 -N 500 -V 0 -S 0 -E 20 -H 3 -G -R
Relation: titanic_train_без2кавычек-weka.filters.unsupervised.attribute.Remove-R1-
weka.filters.unsupervised.attribute.Remove-R3-weka.filters.unsupervised.attribute.Remove-R7-
weka.filters.unsupervised.attribute.Remove-R8-weka.filters.unsupervised.attribute.Remove-R5-6-
weka.filters.unsupervised.attribute.Remove-R5-weka.filters.unsupervised.attribute.Remove-R5
Instances: 891
Attributes: 4
             Survived
             Pclass
             Sex
             Age
Test mode: evaluate on training data

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

Linear Node 0
    Inputs   Weights
    Threshold   -0.20490168624391558
    Node 1   -1.6191259077488376
    Node 2   1.3899609355337414
    Node 3   -1.619129143624606
Sigmoid Node 1
    Inputs   Weights
    Threshold   -5.69883152488049
    Attrib Pclass   0.6152790302769637
    Attrib Sex=female   -3.9670670777602832

Attrib Age   1.2305331071899777
Sigmoid Node 2
   Inputs   Weights
   Threshold   -2.087518468848066
   Attrib Pclass   -4.44125954075273
   Attrib Sex=female   3.3629131912498194
   Attrib Age   -2.2154734616827234
Sigmoid Node 3
   Inputs   Weights
   Threshold   -5.699268376766073
   Attrib Pclass   0.6152788826682052
   Attrib Sex=female   -3.967498901648264
   Attrib Age   1.2305312662133518
Class
   Input
   Node 0

Time taken to build model: 40.99 seconds

=== Evaluation on training set ===

Time taken to test model on training data: 0 seconds

=== Summary ===

Correlation coefficient   0.6351
Mean absolute error   0.2746
Root mean squared error   0.3803
Relative absolute error   58.0447 %
Root relative squared error   78.1904 %
Total Number of Instances   891