

PRÁTICA 5

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1. Arquivo em anexo (dinpop.arff)

2.

weka.classifiers.functions.MultilayerPerceptron

batchSize	100
debug	False
decay	False
doNotCheckCapabilities	False
hiddenLayers	5
learningRate	0.3
momentum	0.2
nominalToBinaryFilter	True
normalizeAttributes	True
normalizeNumericClass	True
numDecimalPlaces	2
reset	False
resume	False
seed	0
trainingTime	10000
validationSetSize	0
validationThreshold	20

3.

Preprocess **Classify** Cluster Associate Select attributes Visualize

Classifier

Choose **MultilayerPerceptron -L 0.3 -M 0.2 -N 10000 -V 0 -S 0 -E 20 -H 5 -R**

Test options

☐ Use training set

☐ Supplied test set

☒ Cross-validation Folds

☐ Percentage split %

(Num) ano_atual

Result list (right-click for options)

- 15:13:43 - functions.MultilayerPerceptron
- 15:14:03 - functions.MultilayerPerceptron
- 15:16:41 - functions.MultilayerPerceptron
- 15:18:42 - functions.MultilayerPerceptron
- 15:19:11 - functions.MultilayerPerceptron
- 15:21:45 - functions.MultilayerPerceptron
- 15:21:52 - functions.MultilayerPerceptron
- 15:22:07 - functions.MultilayerPerceptron
- 15:29:11 - functions.MultilayerPerceptron**

Classifier output

Attrib ano_passado -2.2374031102074227

Sigmoid Node 3

Inputs	Weights
Threshold	-2.4418778847797986
Attrib ano_retrasado	-0.2520238246874318
Attrib ano_passado	-2.041699815783088

Sigmoid Node 4

Inputs	Weights
Threshold	-3.4422528622729107
Attrib ano_retrasado	0.06326202756984761
Attrib ano_passado	-2.4472140183876965

Sigmoid Node 5

Inputs	Weights
Threshold	-7.924834512404117
Attrib ano_retrasado	-8.669319314776693
Attrib ano_passado	4.3753038183940385

Class

Input

Node 0

Time taken to build model: 0.42 seconds


=== Cross-validation ===

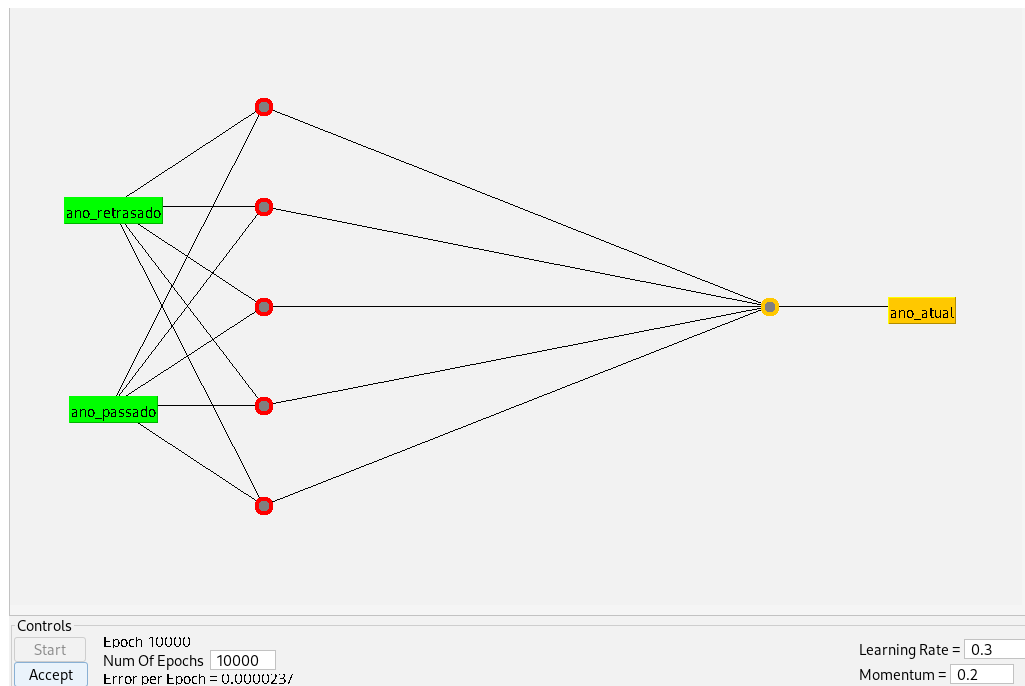
=== Summary ===

Correlation coefficient	0.9999
Mean absolute error	3.5247
Root mean squared error	4.772
Relative absolute error	1.1086 %
Root relative squared error	1.3454 %
Total Number of Instances	198

Status

OK

 x0



=== Run information ===

Scheme:

```
weka.classifiers.functions.MultilayerPerceptron -L 0.3 -M
0.2 -N 10000 -V 0 -S 0 -E 20 -H 5 -R
```

Relation: population

Instances: 198

Attributes: 3

ano_retrasado

ano_passado

ano_atual

Test mode: 10-fold cross-validation

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

Linear Node 0

Inputs	Weights
Threshold	1.8580937203987697
Node 1	-5.3190309719959235
Node 2	-2.106707930628191
Node 3	-2.0949482702354034
Node 4	-3.7367420016498327

Node 5 2.9669612138163957

Sigmoid Node 1

Inputs Weights

Threshold -2.094196821090617

Attrib ano_retrasado -0.5535054530660813

Attrib ano_passado 2.2613795348549677

Sigmoid Node 2

Inputs Weights

Threshold -2.428945984798322

Attrib ano_retrasado 0.1530306822313657

Attrib ano_passado -2.2574691102674227

Sigmoid Node 3

Inputs Weights

Threshold -2.4418778847797986

Attrib ano_retrasado -0.2520238246874318

Attrib ano_passado -2.041699815783088

Sigmoid Node 4

Inputs Weights

Threshold -3.4422528622729107

Attrib ano_retrasado 0.06326202756984761

Attrib ano_passado -2.4472140183876965

Sigmoid Node 5

Inputs Weights

Threshold -7.924834512404117

Attrib ano_retrasado -8.669319314776693

Attrib ano_passado 4.3753038183940385

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