

API Documentation

API Documentation

June 17, 2012

Contents

Contents	1
1 Module <code>genetic_fuzzy_logic_classifier</code>	2
1.1 Variables	2
1.2 Class <code>GeneticFuzzyLogicClassifier</code>	2
1.2.1 Methods	2
1.2.2 Properties	3

1 Module genetic_fuzzy_logic_classifier

1.1 Variables

Name	Description
CROSS_OVER_PROP	Value: 0.8
DIVISIONS	Value: 4
GENERATIONS	Value: 500
K_FOLD_NUMBER	Value: 4
MAX_GRANULATION	Value: 8
MUTATION_PROP	Value: 0.3
POPULATION_SIZE	Value: 10
REPEAT_TEST	Value: 3
__package__	Value: None
datasets	Value: [['iris.data.txt', 1], ['bupa.data.txt', 1], ['pima.data....

1.2 Class GeneticFuzzyLogicClassifier

object  genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier

1.2.1 Methods

__init__(self, debug=False)

x.__init__(...) initializes x; see x.__class__.__doc__ for signature

Overrides: object.__init__

classify(self, pattern)

create_population(self, population_size)

generate_membership_functions(self, divisions=3, do_not_use_prop=0.3)

Divide each attribute into partitions consisting of *divisions* number. For example if we have 4 divisions we will create 15 functions per variables because of (2 + 3 + 4 + 5) plus one do not care function.

get_number_of_attributes(self)

returns the number of attributes in available data

initialize_genetic(self, generations, mutation, crossover)

Sets population size, number of generations, mutation and crossover probabilities

<code>k_fold_cross_validation(self, k)</code>

<code>plot_functions(self, a, b)</code>

<code>prepare_data(self, k_fold_number)</code>
--

<code>read_data(self, filepath, label_is_last=True)</code>
--

label_is_last indicates where label of the class is located. If it is True then it is the last column, otherwise it is the first
--

<code>run(self)</code>

<code>save_results(self)</code>

<code>size_of_data(self)</code>

returns number of patterns

Inherited from object

`__delattr__()`, `__format__()`, `__getattr__()`, `__hash__()`, `__new__()`, `__reduce__()`, `__reduce_ex__()`, `__repr__()`, `__setattr__()`, `__sizeof__()`, `__str__()`, `__subclasshook__()`

1.2.2 Properties

Name	Description
<i>Inherited from object</i>	
<code>__class__</code>	

Index

genetic_fuzzy_logic_classifier (*module*), 2–3

- genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier
(*class*), 2–3
- genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier.classify
(*method*), 2
- genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier.create_population
(*method*), 2
- genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier.generate_membership_functions
(*method*), 2
- genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier.get_number_of_attributes
(*method*), 2
- genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier.initialize_genetic
(*method*), 2
- genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier.k_fold_cross_validation
(*method*), 2
- genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier.plot_functions
(*method*), 3
- genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier.prepare_data
(*method*), 3
- genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier.read_data
(*method*), 3
- genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier.run
(*method*), 3
- genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier.save_results
(*method*), 3
- genetic_fuzzy_logic_classifier.GeneticFuzzyLogicClassifier.size_of_data
(*method*), 3