

BiCAIM

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Chapter 1

Namespace Index

1.1 Package List

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Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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Chapter 3

Class Index

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Chapter 4

Namespace Documentation

4.1 Package factory_interface

Classes

- interface IFFactoryAcceptCandidate
- interface IFFactoryCandidate
- interface IFFactoryCrossover
- interface IFFactoryDistribution
- interface IFFactoryFatherSelection
- interface IFFactoryGenerator
- interface IFFactoryMutation
- interface IFFactoryReplace
- interface IFFactorySolutionMethod
- interface IFFSampling

4.1.1 Detailed Description

@(#)[IFFactoryAcceptCandidate.java](#)

@(#)[IFFactoryCandidate.java](#)

4.2 Package factory_method

Classes

- class FactoryAcceptCandidate
- class FactoryCandidate
- class FactoryCrossover
- class FactoryDistribution
- class FactoryFatherSelection
- class FactoryGenerator
- class FactoryLoader
- class FactoryMutation
- class FactoryReplace

- class [FactorySampling](#)
- class [FactorySolutionMethod](#)
- class [FactoryCandidateTest](#)
- class [FactoryDistributionTest](#)
- class [FactoryGeneratorTest](#)
- class [FactoryLoaderTest](#)
- class [FactorySamplingTest](#)
- class [FactorySolutionMethodTest](#)

4.2.1 Detailed Description

@(#)[FactoryAcceptCandidate.java](#)

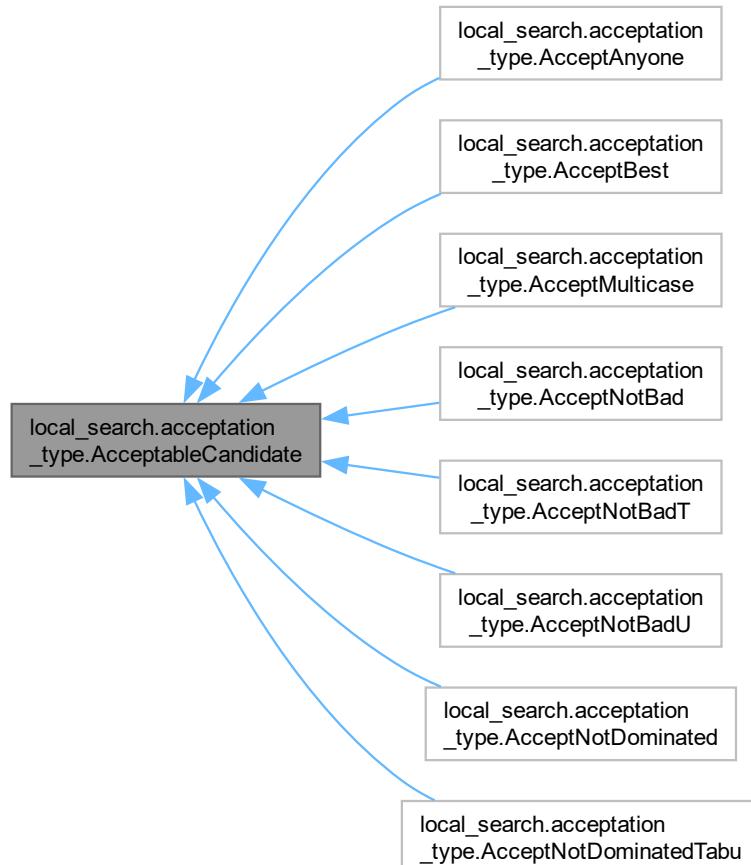
@(#)[FactoryCandidate.java](#)

Chapter 5

Class Documentation

5.1 local_search.acceptation_type.AcceptableCandidate Interface Reference

Inheritance diagram for local_search.acceptation_type.AcceptableCandidate:



Public Member Functions

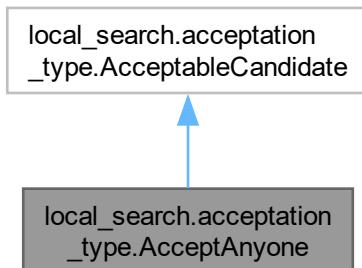
- Boolean `acceptCandidate` (`State` stateCurrent, `State` stateCandidate)

The documentation for this interface was generated from the following file:

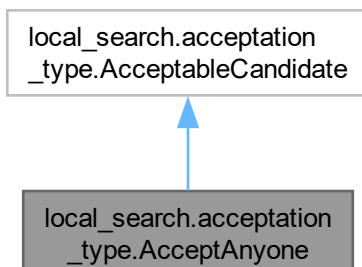
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/acceptation_type/AcceptableCandidate.java

5.2 local_search.acceptation_type.AcceptAnyone Class Reference

Inheritance diagram for local_search.acceptation_type.AcceptAnyone:



Collaboration diagram for local_search.acceptation_type.AcceptAnyone:



Public Member Functions

- Boolean `acceptCandidate` (`State` stateCurrent, `State` stateCandidate)

5.2.1 Member Function Documentation

5.2.1.1 acceptCandidate()

```
Boolean local_search.acceptation_type.AcceptAnyone.acceptCandidate (
    State stateCurrent,
    State stateCandidate)
```

Implements [local_search.acceptation_type.AcceptableCandidate](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/acceptation_type/AcceptAnyone.java

5.3 local_search.acceptation_type.AcceptationTypeTest Class Reference

Public Member Functions

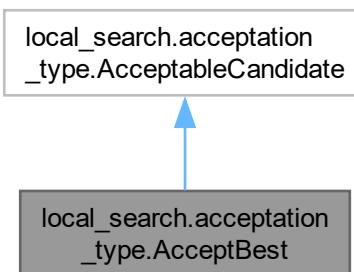
- void **setUp** ()
- void **testAcceptAnyone** ()
- void **testAcceptBestMaximization** () throws Exception
- void **testAcceptBestMinimization** () throws Exception
- void **testAcceptNotBadMaximization** () throws Exception
- void **testAcceptNotDominated** ()
- void **testAcceptNotBadT** ()
- void **testAcceptNotBadU** ()
- void **testAcceptMulticase** ()

The documentation for this class was generated from the following file:

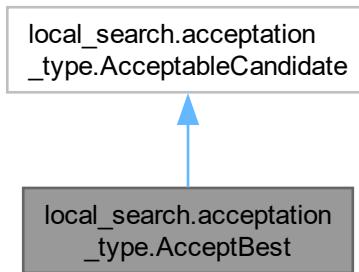
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/local_search/acceptation_type/AcceptationTypeTest.java

5.4 local_search.acceptation_type.AcceptBest Class Reference

Inheritance diagram for local_search.acceptation_type.AcceptBest:



Collaboration diagram for local_search.acceptation_type.AcceptBest:



Public Member Functions

- Boolean acceptCandidate (State stateCurrent, State stateCandidate)

5.4.1 Member Function Documentation

5.4.1.1 acceptCandidate()

```
Boolean local_search.acceptation_type.AcceptBest.acceptCandidate (
    State stateCurrent,
    State stateCandidate)
```

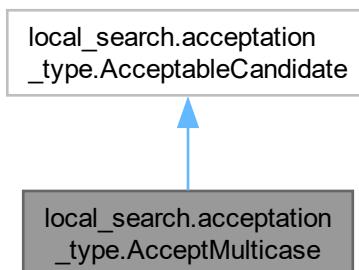
Implements [local_search.acceptation_type.AcceptableCandidate](#).

The documentation for this class was generated from the following file:

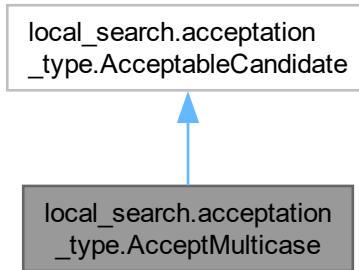
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/acceptation_type/AcceptBest.java

5.5 local_search.acceptation_type.AcceptMulticase Class Reference

Inheritance diagram for local_search.acceptation_type.AcceptMulticase:



Collaboration diagram for local_search.acceptation_type.AcceptMulticase:



Public Member Functions

- Boolean `acceptCandidate (State stateCurrent, State stateCandidate)`

5.5.1 Member Function Documentation

5.5.1.1 acceptCandidate()

```
Boolean local_search.acceptation_type.AcceptMulticase.acceptCandidate (
    State stateCurrent,
    State stateCandidate)
```

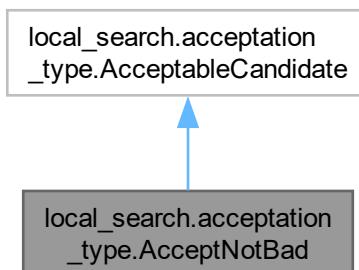
Implements `local_search.acceptation_type.AcceptableCandidate`.

The documentation for this class was generated from the following file:

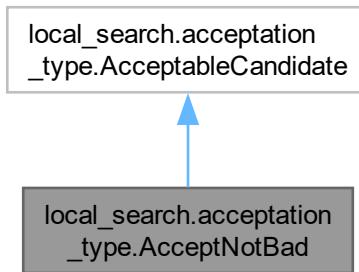
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/acceptation_type/AcceptMulticase.java

5.6 local_search.acceptation_type.AcceptNotBad Class Reference

Inheritance diagram for local_search.acceptation_type.AcceptNotBad:



Collaboration diagram for local_search.acceptation_type.AcceptNotBad:



Public Member Functions

- Boolean acceptCandidate (State stateCurrent, State stateCandidate)

5.6.1 Member Function Documentation

5.6.1.1 acceptCandidate()

```
Boolean local_search.acceptation_type.AcceptNotBad.acceptCandidate (
    State stateCurrent,
    State stateCandidate)
```

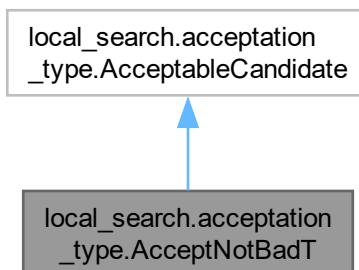
Implements [local_search.acceptation_type.AcceptableCandidate](#).

The documentation for this class was generated from the following file:

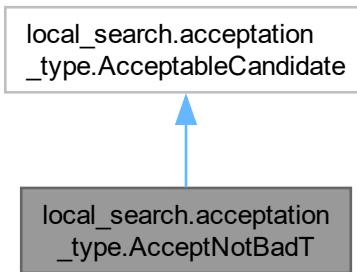
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/acceptation_type/AcceptNotBad.java

5.7 local_search.acceptation_type.AcceptNotBadT Class Reference

Inheritance diagram for local_search.acceptation_type.AcceptNotBadT:



Collaboration diagram for local_search.acceptation_type.AcceptNotBadT:



Public Member Functions

- Boolean `acceptCandidate (State stateCurrent, State stateCandidate)`

5.7.1 Member Function Documentation

5.7.1.1 acceptCandidate()

```
Boolean local_search.acceptation_type.AcceptNotBadT.acceptCandidate (
    State stateCurrent,
    State stateCandidate)
```

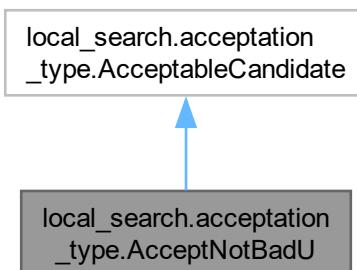
Implements `local_search.acceptation_type.AcceptableCandidate`.

The documentation for this class was generated from the following file:

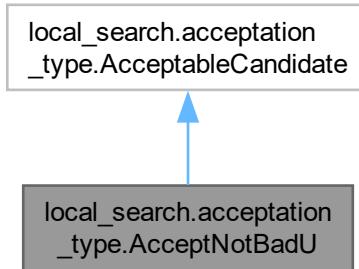
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/acceptation_type/AcceptNotBadT.java

5.8 local_search.acceptation_type.AcceptNotBadU Class Reference

Inheritance diagram for local_search.acceptation_type.AcceptNotBadU:



Collaboration diagram for local_search.acceptation_type.AcceptNotBadU:



Public Member Functions

- Boolean `acceptCandidate (State stateCurrent, State stateCandidate)`

5.8.1 Member Function Documentation

5.8.1.1 acceptCandidate()

```
Boolean local_search.acceptation_type.AcceptNotBadU.acceptCandidate (
    State stateCurrent,
    State stateCandidate)
```

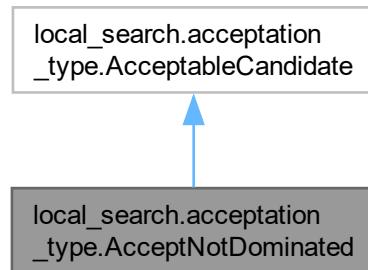
Implements [local_search.acceptation_type.AcceptableCandidate](#).

The documentation for this class was generated from the following file:

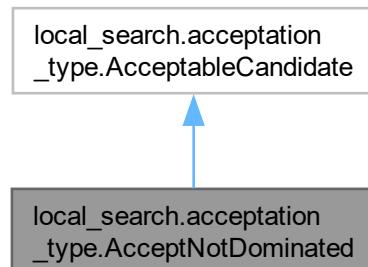
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/acceptation_type/AcceptNotBadU.java

5.9 local_search.acceptation_type.AcceptNotDominated Class Reference

Inheritance diagram for local_search.acceptation_type.AcceptNotDominated:



Collaboration diagram for local_search.acceptation_type.AcceptNotDominated:



Public Member Functions

- Boolean acceptCandidate (`State stateCurrent, State stateCandidate`)

5.9.1 Member Function Documentation

5.9.1.1 acceptCandidate()

```
Boolean local_search.acceptation_type.AcceptNotDominated.acceptCandidate (
    State stateCurrent,
    State stateCandidate)
```

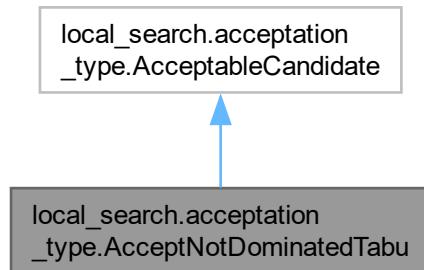
Implements [local_search.acceptation_type.AcceptableCandidate](#).

The documentation for this class was generated from the following file:

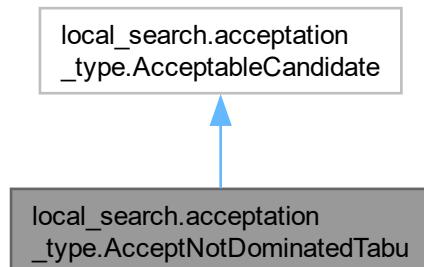
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/acceptation_type/AcceptNotDominated.java

5.10 local_search.acceptation_type.AcceptNotDominatedTabu Class Reference

Inheritance diagram for local_search.acceptation_type.AcceptNotDominatedTabu:



Collaboration diagram for local_search.acceptation_type.AcceptNotDominatedTabu:



Public Member Functions

- Boolean `acceptCandidate (State stateCurrent, State stateCandidate)`

5.10.1 Member Function Documentation

5.10.1.1 acceptCandidate()

```
Boolean local_search.acceptation_type.AcceptNotDominatedTabu.acceptCandidate (
    State stateCurrent,
    State stateCandidate)
```

Implements [local_search.acceptation_type.AcceptableCandidate](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/acceptation_type/AcceptNotDominatedTabu.java

5.11 local_search.acceptation_type.AcceptType Enum Reference

Public Attributes

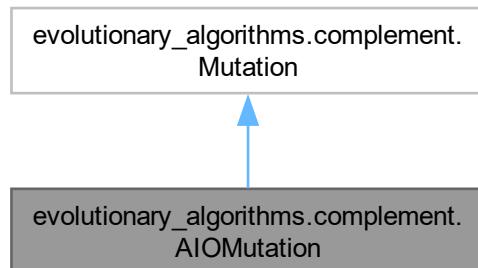
- AcceptAnyone
- AcceptBest
- AcceptNotBad
- AcceptNotBadT
- AcceptNotBadU
- AcceptMulticase
- AcceptNotDominated
- AcceptNotDominatedTabu

The documentation for this enum was generated from the following file:

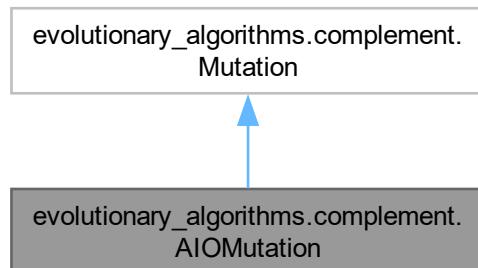
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/acceptation_type/AcceptType.java

5.12 evolutionary_algorithms.complement.AIOMutation Class Reference

Inheritance diagram for evolutionary_algorithms.complement.AIOMutation:



Collaboration diagram for evolutionary_algorithms.complement.AIOMutation:



Public Member Functions

- `State mutation (State state, double PM)`
- `void sortedPathValue (State state)`

Static Public Member Functions

- `static void fillPath ()`

Static Public Attributes

- `static ArrayList< Object > path = new ArrayList<Object>()`

5.12.1 Member Function Documentation

5.12.1.1 mutation()

```
State evolutionary_algorithms.complement.AIOMutation.mutation (
    State state,
    double PM)
```

Reimplemented from [evolutionary_algorithms.complement.Mutation](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/AIOMutation.java

5.13 local_search.candidate_type.CandidateType Enum Reference

Public Attributes

- `RandomCandidate`
- `GreaterCandidate`
- `SmallerCandidate`
- `NotDominatedCandidate`

The documentation for this enum was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/candidate_type/CandidateType.java

5.14 local_search.candidate_type.CandidateTypeTest Class Reference

Public Member Functions

- void **setUp** ()
- void **testRandomCandidate** () throws Exception
- void **testGreaterCandidate** () throws Exception
- void **testSmallerCandidate** () throws Exception
- void **testNotDominatedCandidate** () throws Exception

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/local_search/candidate_type/CandidateTypeTest.java

5.15 local_search.candidate_type.CandidateValue Class Reference

Public Member Functions

- State **stateCandidate** (State stateReference, CandidateType type, StrategyType strategy, Integer operator-number, List< State > neighborhood)

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/candidate_type/CandidateValue.java

5.16 problem.definition.Codification Class Reference

Public Member Functions

- abstract boolean **validState** (State state)
- abstract Object **getVariableAleatoryValue** (int key)
- abstract int **getAleatoryKey** ()
- abstract int **getVariableCount** ()

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/problem/definition/Codification.java

5.17 problem.definition.CodificationTest Class Reference

Public Member Functions

- void **testAbstractImplementation** ()

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/problem/definition/CodificationTest.java

5.18 local_search.complement.ComplementTest Class Reference

Public Member Functions

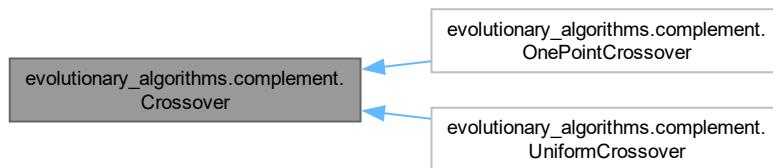
- void **setUp** ()
- void **testUpdateParameter** ()
- void **testTabuSolutions** () throws Exception

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/local_search/complement/ComplementTest.java

5.19 evolutionary_algorithms.complement.Crossover Class Reference

Inheritance diagram for evolutionary_algorithms.complement.Crossover:



Public Member Functions

- abstract **State crossover** (**State** father1, **State** father2, double PC)

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/Crossover.java

5.20 evolutionary_algorithms.complement.CrossoverType Enum Reference

Public Attributes

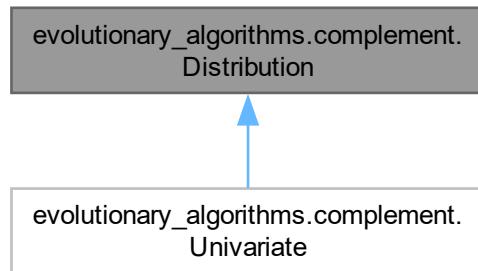
- **OnePointCrossover**
- **UniformCrossover**

The documentation for this enum was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/CrossoverType.java

5.21 evolutionary_algorithms.complement.Distribution Class Reference

Inheritance diagram for evolutionary_algorithms.complement.Distribution:



Public Member Functions

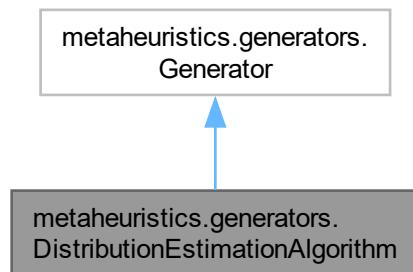
- abstract List< [Probability](#) > **distribution** (List< [State](#) > fathers)

The documentation for this class was generated from the following file:

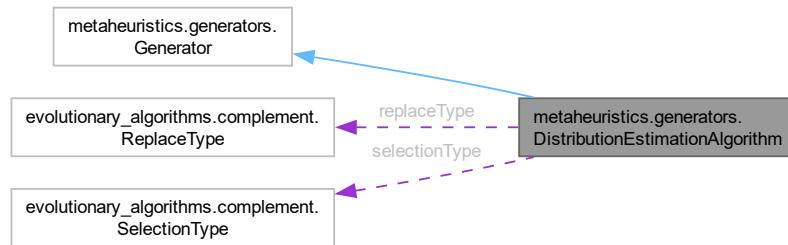
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/Distribution.java

5.22 metaheuristics.generators.DistributionEstimationAlgorithm Class Reference

Inheritance diagram for metaheuristics.generators.DistributionEstimationAlgorithm:



Collaboration diagram for metaheuristics.generators.DistributionEstimationAlgorithm:



Public Member Functions

- `State MaxValue (List< State > listInd)`
- `State generate (Integer operatornumber) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`
- `State getReference ()`
- `List< State > getReferenceList ()`
- `GeneratorType getType ()`
- `void setInitialReference (State statelInitialRef)`
- `void updateReference (State stateCandidate, Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`
- `List< State > getListStateRef ()`
- `List< State > getListReference ()`
- `void setListReference (List< State > listReference)`
- `GeneratorType getGeneratorType ()`
- `void setGeneratorType (GeneratorType generatorType)`
- `List< State > getfathersList () throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`
- `List< State > getSonList ()`
- `boolean awardUpdateREF (State stateCandidate)`
- `float getWeight ()`
- `void setWeight (float weight)`
- `DistributionType getDistributionType ()`
- `void setDistributionType (DistributionType distributionType)`
- `int[] getListCountBetterGender ()`
- `int[] getListCountGender ()`
- `float[] getTrace ()`

Static Public Attributes

- `static List< State > sonList = new ArrayList<State>()`
- `static ReplaceType replaceType`
- `static SelectionType selectionType`
- `static int truncation`
- `static int countRef = 0`
- `static int countGender = 0`
- `static int countBetterGender = 0`

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- int **countGender**
- int **countBetterGender**
- int[] **listCountBetterGender**

5.22.1 Member Function Documentation

5.22.1.1 **awardUpdateREF()**

```
boolean metaheuristics.generators.DistributionEstimationAlgorithm.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.22.1.2 **generate()**

```
State metaheuristics.generators.DistributionEstimationAlgorithm.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.22.1.3 **getListCountBetterGender()**

```
int[] metaheuristics.generators.DistributionEstimationAlgorithm.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.22.1.4 **getListCountGender()**

```
int[] metaheuristics.generators.DistributionEstimationAlgorithm.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.22.1.5 **getReference()**

```
State metaheuristics.generators.DistributionEstimationAlgorithm.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.22.1.6 `getReferenceList()`

```
List< State > metaheuristics.generators.DistributionEstimationAlgorithm.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.22.1.7 `getSonList()`

```
List< State > metaheuristics.generators.DistributionEstimationAlgorithm.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.22.1.8 `getTrace()`

```
float[] metaheuristics.generators.DistributionEstimationAlgorithm.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.22.1.9 `getType()`

```
GeneratorType metaheuristics.generators.DistributionEstimationAlgorithm.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.22.1.10 `getWeight()`

```
float metaheuristics.generators.DistributionEstimationAlgorithm.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.22.1.11 `setInitialReference()`

```
void metaheuristics.generators.DistributionEstimationAlgorithm.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.22.1.12 `setWeight()`

```
void metaheuristics.generators.DistributionEstimationAlgorithm.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.22.1.13 updateReference()

```
void metaheuristics.generators.DistributionEstimationAlgorithm.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
Exception, NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/DistributionEstimationAlgorithm.java

5.23 metaheuristics.generators.DistributionEstimationAlgorithmTest Class Reference

Public Member Functions

- void **setUp** () throws Exception
- void **tearDown** () throws Exception
- void **testGenerate** () throws Exception
- void **testUpdateReference** () throws Exception
- void **testGetReference** ()
- void **testGetType** ()
- void **test.MaxValue** ()
- void **testGetListStateRef_Empty** ()
- void **testAwardUpdateREF** ()
- void **testGettersAndSetters** ()
- void **testGetListReference** ()

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/DistributionEstimationAlgorithmTest.java

5.24 evolutionary_algorithms.complement.DistributionType Enum Reference

Public Attributes

- **Univariate**

The documentation for this enum was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/DistributionType.java

5.25 local_search.acceptation_type.Dominance Class Reference

Public Member Functions

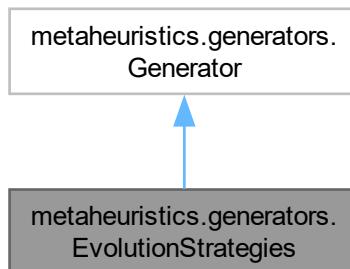
- boolean **dominance** (`State` solutionX, `State` solutionY)
- boolean **ListDominance** (`State` stateCandidate, `List< State >` listRefPoblacFinal)

The documentation for this class was generated from the following file:

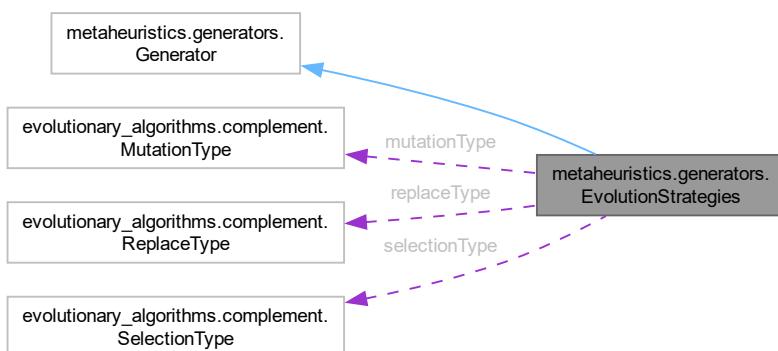
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/acceptation_type/Dominance.java

5.26 metaheuristics.generators.EvolutionStrategies Class Reference

Inheritance diagram for metaheuristics.generators.EvolutionStrategies:



Collaboration diagram for metaheuristics.generators.EvolutionStrategies:



Public Member Functions

- `State generate (Integer operatornumber)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- `State getReference ()`
- `void setStateRef (State stateRef)`
- `GeneratorType getType ()`
- `void setInitialReference (State stateInitialRef)`
- `void updateReference (State stateCandidate, Integer countIterationsCurrent)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- `List< State > getListStateRef ()`
- `List< State > getListStateReference ()`
- `void setListStateReference (List< State > listStateReference)`
- `GeneratorType getTypeGenerator ()`
- `void setTypeGenerator (GeneratorType generatorType)`
- `List< State > getReferenceList ()`
- `List< State > getSonList ()`
- `boolean awardUpdateREF (State stateCandidate)`
- `float getWeight ()`
- `void setWeight (float weight)`
- `int[] getCountBetterGender ()`
- `int[] getCountGender ()`
- `float[] getTrace ()`

Static Public Attributes

- `static double PM`
- `static MutationType mutationType`
- `static ReplaceType replaceType`
- `static SelectionType selectionType`
- `static int countRef = 0`
- `static int truncation`
- `static int countGender = 0`
- `static int countBetterGender = 0`

Additional Inherited Members

Public Attributes inherited from `metaheuristics.generators.Generator`

- `int countGender`
- `int countBetterGender`
- `int[] listCountBetterGender`

5.26.1 Member Function Documentation

5.26.1.1 awardUpdateREF()

```
boolean metaheuristics.generators.EvolutionStrategies.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from `metaheuristics.generators.Generator`.

5.26.1.2 generate()

```
State metaheuristics.generators.EvolutionStrategies.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.26.1.3 getListCountBetterGender()

```
int[] metaheuristics.generators.EvolutionStrategies.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.26.1.4 getListCountGender()

```
int[] metaheuristics.generators.EvolutionStrategies.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.26.1.5 getReference()

```
State metaheuristics.generators.EvolutionStrategies.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.26.1.6 getReferenceList()

```
List< State > metaheuristics.generators.EvolutionStrategies.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.26.1.7 getSonList()

```
List< State > metaheuristics.generators.EvolutionStrategies.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.26.1.8 getTrace()

```
float[] metaheuristics.generators.EvolutionStrategies.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.26.1.9 getType()

```
GeneratorType metaheuristics.generators.EvolutionStrategies.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.26.1.10 getWeight()

```
float metaheuristics.generators.EvolutionStrategies.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.26.1.11 setInitialReference()

```
void metaheuristics.generators.EvolutionStrategies.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.26.1.12 setWeight()

```
void metaheuristics.generators.EvolutionStrategies.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.26.1.13 updateReference()

```
void metaheuristics.generators.EvolutionStrategies.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/EvolutionStrategies.java

5.27 metaheuristics.generators.EvolutionStrategiesTest Class Reference

Public Member Functions

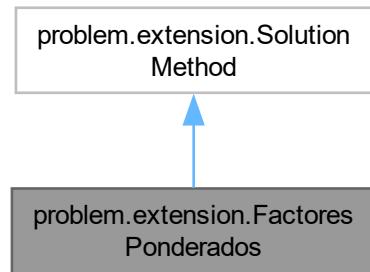
- void **setUp** () throws Exception
- void **tearDown** () throws Exception
- void **testGenerate** () throws Exception
- void **testGetType** ()
- void **testGetReference** () throws Exception
- void **testUpdateReference** () throws Exception
- void **testGetListStateRef_FromRandomSearch** ()
- void **testGetListStateRef_FromOtherGenerator** ()
- void **testGetSetters** ()
- void **testGetReferenceList** ()
- void **testGetListStateReference** ()

The documentation for this class was generated from the following file:

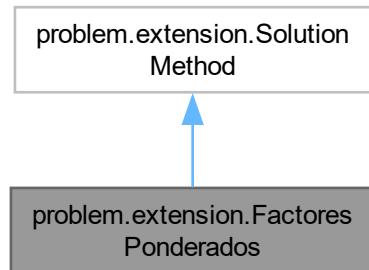
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/EvolutionStrategiesTest.java

5.28 problem.extension.FactoresPonderados Class Reference

Inheritance diagram for problem.extension.FactoresPonderados:



Collaboration diagram for problem.extension.FactoresPonderados:



Public Member Functions

- void [evaluationState \(State state\)](#)

5.28.1 Member Function Documentation

5.28.1.1 evaluationState()

```
void problem.extension.FactoresPonderados.evaluationState ( State state)
```

Reimplemented from [problem.extension.SolutionMethod](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/problem/extension/FactoresPonderados.java

5.29 problem.extension.FactoresPonderadosTest Class Reference

Public Member Functions

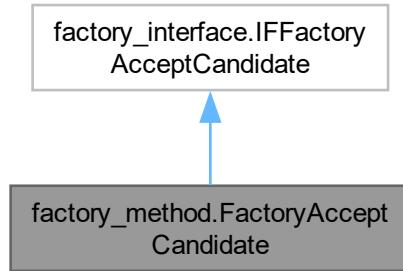
- void **setUp ()**
- void **testEvaluationStateMaximizarMaximizar ()**
- void **testEvaluationStateMaximizarMinimizar ()**
- void **testEvaluationStateMinimizarMaximizar ()**
- void **testEvaluationStateMinimizarMinimizar ()**

The documentation for this class was generated from the following file:

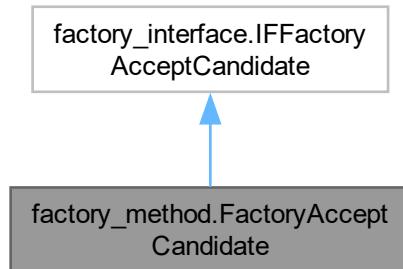
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/problem/extension/FactoresPonderadosTest.java

5.30 factory_method.FactoryAcceptCandidate Class Reference

Inheritance diagram for factory_method.FactoryAcceptCandidate:



Collaboration diagram for factory_method.FactoryAcceptCandidate:



Public Member Functions

- `AcceptableCandidate createAcceptCandidate (AcceptType typeacceptation) throws IllegalArgument←Exception, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`

5.30.1 Member Function Documentation

5.30.1.1 createAcceptCandidate()

```
AcceptableCandidate factory_method.FactoryAcceptCandidate.createAcceptCandidate (←  
    AcceptType typeacceptation) throws IllegalArgumentException, SecurityException,
```

ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException

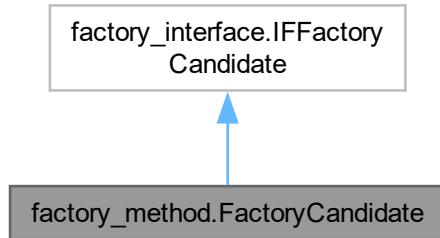
Implements [factory_interface.IFFactoryAcceptCandidate](#).

The documentation for this class was generated from the following file:

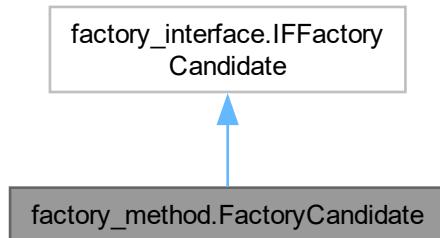
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_method/FactoryAcceptCandidate.java

5.31 factory_method.FactoryCandidate Class Reference

Inheritance diagram for factory_method.FactoryCandidate:



Collaboration diagram for factory_method.FactoryCandidate:



Public Member Functions

- [SearchCandidate createSearchCandidate \(CandidateType typeCandidate\)](#) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException

5.31.1 Member Function Documentation

5.31.1.1 createSearchCandidate()

```
SearchCandidate factory_method.FactoryCandidate.createSearchCandidate (
    CandidateType typeCandidate) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
Exception, NoSuchMethodException
```

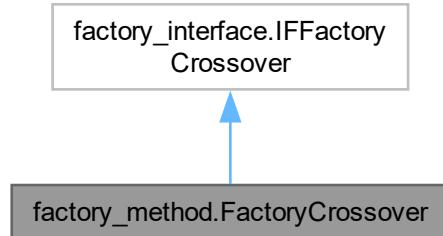
Implements [factory_interface.IFFactoryCandidate](#).

The documentation for this class was generated from the following file:

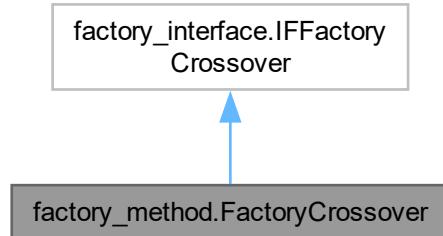
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_method/FactoryCandidate.java

5.32 factory_method.FactoryCrossover Class Reference

Inheritance diagram for factory_method.FactoryCrossover:



Collaboration diagram for factory_method.FactoryCrossover:



Public Member Functions

- `Crossover createCrossover (CrossoverType CrossoverType) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`

5.32.1 Member Function Documentation

5.32.1.1 createCrossover()

```
Crossover factory_method.FactoryCrossover.createCrossover (
    CrossoverType CrossoverType) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

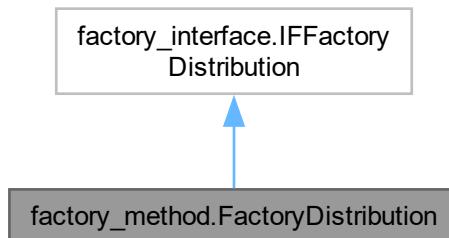
Implements [factory_interface.IFFactoryCrossover](#).

The documentation for this class was generated from the following file:

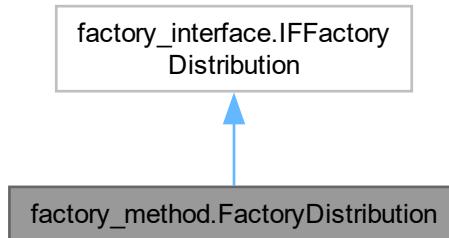
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_method/FactoryCrossover.java

5.33 factory_method.FactoryDistribution Class Reference

Inheritance diagram for factory_method.FactoryDistribution:



Collaboration diagram for factory_method.FactoryDistribution:



Public Member Functions

- `Distribution createDistribution (DistributionType distributiontype)` throws `IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`

5.33.1 Member Function Documentation

5.33.1.1 `createDistribution()`

```
Distribution factory_method.FactoryDistribution.createDistribution (
    DistributionType distributiontype) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException
```

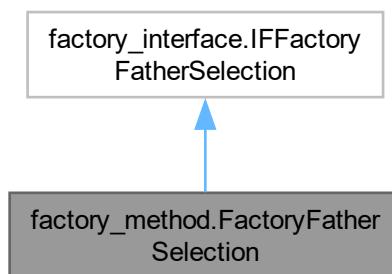
Implements `factory_interface.IFFactoryDistribution`.

The documentation for this class was generated from the following file:

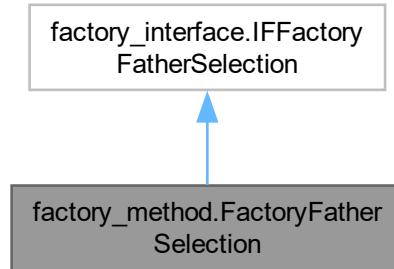
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_method/FactoryDistribution.java

5.34 factory_method.FactoryFatherSelection Class Reference

Inheritance diagram for `factory_method.FactoryFatherSelection`:



Collaboration diagram for factory_method.FactoryFatherSelection:



Public Member Functions

- `FatherSelection createSelectFather (SelectionType selectionType) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`

5.34.1 Member Function Documentation

5.34.1.1 createSelectFather()

```
FatherSelection factory_method.FactoryFatherSelection.createSelectFather (
    SelectionType selectionType) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

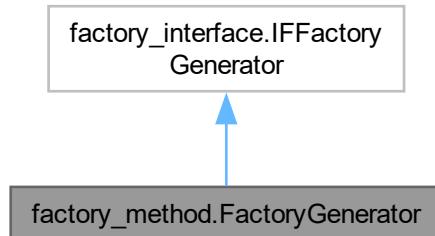
Implements [factory_interface.IFFactoryFatherSelection](#).

The documentation for this class was generated from the following file:

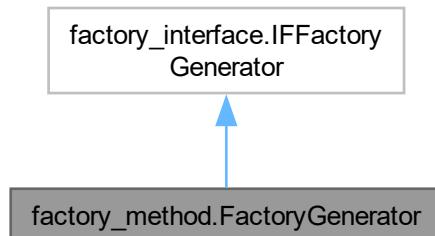
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_method/FactoryFatherSelection.java

5.35 factory_method.FactoryGenerator Class Reference

Inheritance diagram for factory_method.FactoryGenerator:



Collaboration diagram for factory_method.FactoryGenerator:



Public Member Functions

- `Generator createGenerator (GeneratorType generatorType) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`

5.35.1 Member Function Documentation

5.35.1.1 createGenerator()

```

Generator factory_method.FactoryGenerator.createGenerator (
    GeneratorType generatorType) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
  
```

Implements [factory_interface.IFFactoryGenerator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_method/FactoryGenerator.java

5.36 factory_method.FactoryLoader Class Reference

Static Public Member Functions

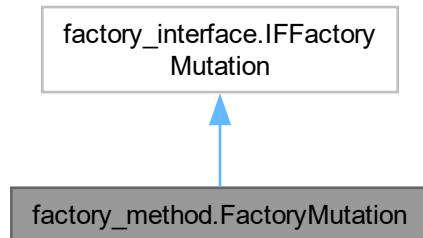
- static Object **getInstance** (String className) throws ClassNotFoundException, IllegalArgumentException, SecurityException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException

The documentation for this class was generated from the following file:

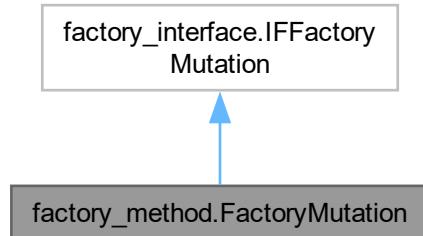
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_method/FactoryLoader.java

5.37 factory_method.FactoryMutation Class Reference

Inheritance diagram for factory_method.FactoryMutation:



Collaboration diagram for factory_method.FactoryMutation:



Public Member Functions

- `Mutation createMutation (MutationType typeMutation)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`

5.37.1 Member Function Documentation

5.37.1.1 `createMutation()`

```
Mutation factory_method.FactoryMutation.createMutation (
    MutationType typeMutation) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
Exception, NoSuchMethodException
```

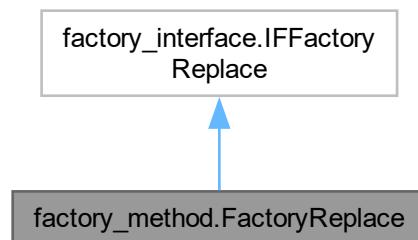
Implements `factory_interface.IFFactoryMutation`.

The documentation for this class was generated from the following file:

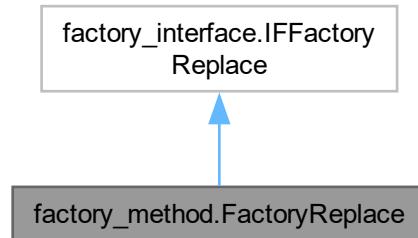
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_method/FactoryMutation.java

5.38 factory_method.FactoryReplace Class Reference

Inheritance diagram for `factory_method.FactoryReplace`:



Collaboration diagram for `factory_method.FactoryReplace`:



Public Member Functions

- `Replace createReplace (ReplaceType typereplace) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`

5.38.1 Member Function Documentation

5.38.1.1 `createReplace()`

```
Replace factory_method.FactoryReplace.createReplace (
    ReplaceType typereplace) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

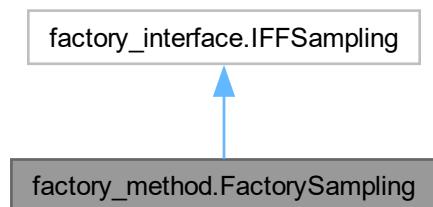
Implements [factory_interface.IFFactoryReplace](#).

The documentation for this class was generated from the following file:

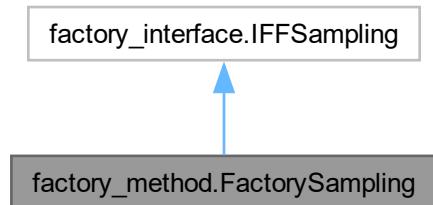
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_method/FactoryReplace.java

5.39 factory_method.FactorySampling Class Reference

Inheritance diagram for factory_method.FactorySampling:



Collaboration diagram for factory_method.FactorySampling:



Public Member Functions

- `Sampling createSampling (SamplingType typesampling) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`

5.39.1 Member Function Documentation

5.39.1.1 `createSampling()`

```
Sampling factory_method.FactorySampling.createSampling (
    SamplingType typesampling) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

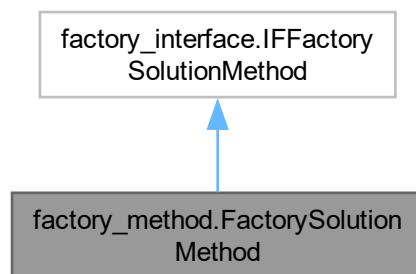
Implements `factory_interface.IFFSampling`.

The documentation for this class was generated from the following file:

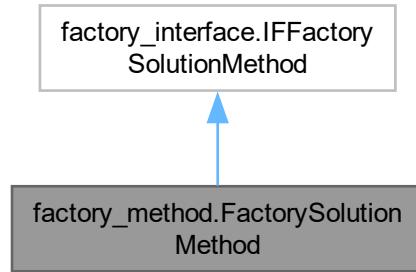
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_method/FactorySampling.java

5.40 `factory_method.FactorySolutionMethod` Class Reference

Inheritance diagram for `factory_method.FactorySolutionMethod`:



Collaboration diagram for factory_method.FactorySolutionMethod:



Public Member Functions

- `SolutionMethod createdSolutionMethod (TypeSolutionMethod method) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`

5.40.1 Member Function Documentation

5.40.1.1 createdSolutionMethod()

```

SolutionMethod factory_method.FactorySolutionMethod.createdSolutionMethod (
    TypeSolutionMethod method) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
  
```

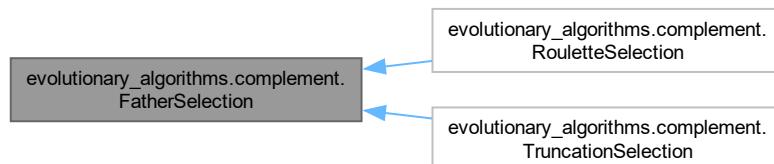
Implements `factory_interface.IFFactorySolutionMethod`.

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_method/FactorySolutionMethod.java

5.41 evolutionary_algorithms.complement.FatherSelection Class Reference

Inheritance diagram for evolutionary_algorithms.complement.FatherSelection:



Public Member Functions

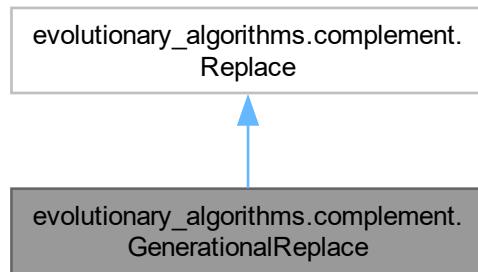
- abstract List< [State](#) > **selection** (List< [State](#) > listState, int truncation)

The documentation for this class was generated from the following file:

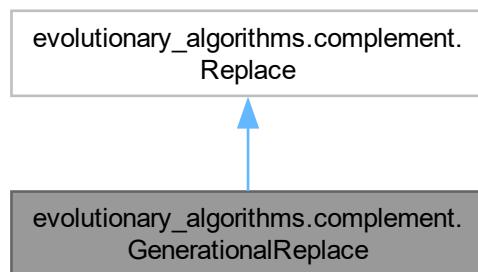
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/FatherSelection.java

5.42 evolutionary_algorithms.complement.GenerationalReplace Class Reference

Inheritance diagram for evolutionary_algorithms.complement.GenerationalReplace:



Collaboration diagram for evolutionary_algorithms.complement.GenerationalReplace:



Public Member Functions

- List< [State](#) > **replace** ([State](#) stateCandidate, List< [State](#) > listState) throws [IllegalArgumentException](#), [SecurityException](#), [ClassNotFoundException](#), [InstantiationException](#), [IllegalAccessException](#), [InvocationTargetException](#), [NoSuchMethodException](#)

5.42.1 Member Function Documentation

5.42.1.1 replace()

```
List< State > evolutionary_algorithms.complement.GenerationalReplace.replace (
    State stateCandidate,
    List< State > listState) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

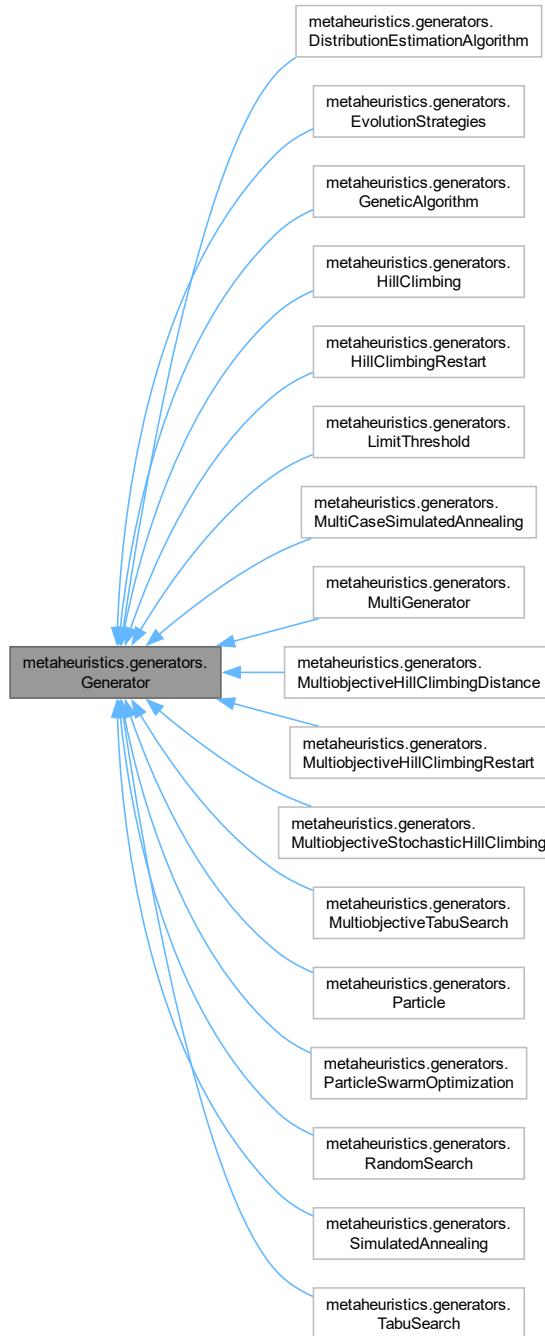
Reimplemented from [evolutionary_algorithms.complement.Replace](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/GenerationalReplace.java

5.43 metaheuristics.generators.Generator Class Reference

Inheritance diagram for metaheuristics.generators.Generator:



Public Member Functions

- abstract `State generate (Integer operatornumber)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`

- abstract void **updateReference** ([State](#) stateCandidate, Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException
- abstract [State](#) **getReference** ()
- abstract void **setInitialReference** ([State](#) stateInitialRef)
- abstract [GeneratorType](#) **getType** ()
- abstract List<[State](#)> **getReferenceList** ()
- abstract List<[State](#)> **getSonList** ()
- abstract boolean **awardUpdateREF** ([State](#) stateCandidate)
- abstract void **setWeight** (float weight)
- abstract float **getWeight** ()
- abstract float[] **getTrace** ()
- abstract int[] **getListCountBetterGender** ()
- abstract int[] **getListCountGender** ()

Public Attributes

- int **countGender**
- int **countBetterGender**
- int[] **listCountBetterGender**

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/Generator.java

5.44 metaheuristics.generators.GeneratorsTest Class Reference

Public Member Functions

- void **setUp** ()
- void **testHillClimbingRestartInitialization** ()

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/GeneratorsTest.java

5.45 metaheuristics.generators.GeneratorType Enum Reference

Public Attributes

- **HillClimbing**
- **TabuSearch**
- **SimulatedAnnealing**
- **RandomSearch**
- **LimitThreshold**
- **HillClimbingRestart**
- **GeneticAlgorithm**
- **EvolutionStrategies**

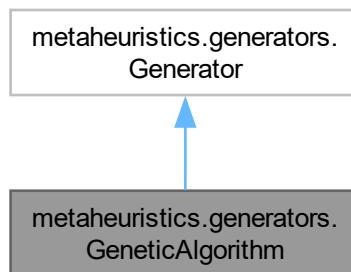
- **DistributionEstimationAlgorithm**
- **ParticleSwarmOptimization**
- **MultiGenerator**
- **MultiobjectiveTabuSearch**
- **MultiobjectiveStochasticHillClimbing**
- **MultiCaseSimulatedAnnealing**
- **MultiobjectiveHillClimbingRestart**
- **MultiobjectiveHillClimbingDistance**

The documentation for this enum was generated from the following file:

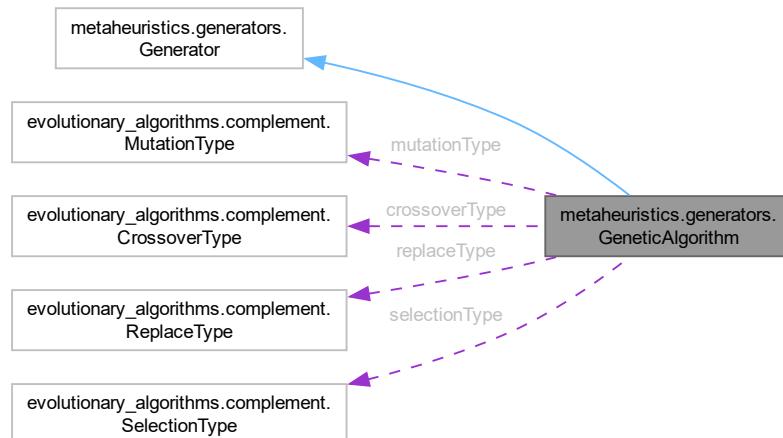
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/GeneratorType.java

5.46 metaheuristics.generators.GeneticAlgorithm Class Reference

Inheritance diagram for metaheuristics.generators.GeneticAlgorithm:



Collaboration diagram for metaheuristics.generators.GeneticAlgorithm:



Public Member Functions

- `State generate (Integer operatornumber)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- `State getReference ()`
- `void setStateRef (State stateRef)`
- `void setInitialReference (State stateInitialRef)`
- `void updateReference (State stateCandidate, Integer countIterationsCurrent)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- `List< State > getListState ()`
- `void setListState (List< State > listState)`
- `List< State > getListStateRef ()`
- `GeneratorType getGeneratorType ()`
- `void setGeneratorType (GeneratorType generatorType)`
- `GeneratorType getType ()`
- `List< State > getReferenceList ()`
- `List< State > getSonList ()`
- `boolean awardUpdateREF (State stateCandidate)`
- `float getWeight ()`
- `void setWeight (float weight)`
- `int[] getListCountBetterGender ()`
- `int[] getListCountGender ()`
- `float[] getTrace ()`

Static Public Attributes

- static `MutationType mutationType`
- static `CrossoverType crossoverType`
- static `ReplaceType replaceType`
- static `SelectionType selectionType`
- static double `PC`
- static double `PM`
- static int `countRef` = 0
- static int `truncation`
- static int `countGender` = 0
- static int `countBetterGender` = 0

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- int `countGender`
- int `countBetterGender`
- int[] `listCountBetterGender`

5.46.1 Member Function Documentation

5.46.1.1 awardUpdateREF()

```
boolean metaheuristics.generators.GeneticAlgorithm.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.46.1.2 generate()

```
State metaheuristics.generators.GeneticAlgorithm.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.46.1.3 getListCountBetterGender()

```
int[ ] metaheuristics.generators.GeneticAlgorithm.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.46.1.4 getListCountGender()

```
int[ ] metaheuristics.generators.GeneticAlgorithm.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.46.1.5 getReference()

```
State metaheuristics.generators.GeneticAlgorithm.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.46.1.6 getReferenceList()

```
List< State > metaheuristics.generators.GeneticAlgorithm.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.46.1.7 getSonList()

```
List< State > metaheuristics.generators.GeneticAlgorithm.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.46.1.8 getTrace()

```
float[ ] metaheuristics.generators.GeneticAlgorithm.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.46.1.9 getType()

```
GeneratorType metaheuristics.generators.GeneticAlgorithm.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.46.1.10 getWeight()

```
float metaheuristics.generators.GeneticAlgorithm.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.46.1.11 setInitialReference()

```
void metaheuristics.generators.GeneticAlgorithm.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.46.1.12 setWeight()

```
void metaheuristics.generators.GeneticAlgorithm.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.46.1.13 updateReference()

```
void metaheuristics.generators.GeneticAlgorithm.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/GeneticAlgorithm.java

5.47 metaheuristics.generators.GeneticAlgorithmTest Class Reference

Public Member Functions

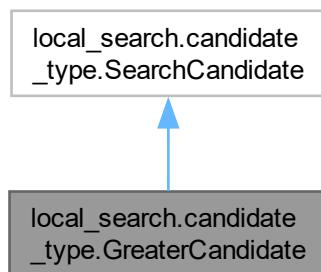
- void **setUp** () throws Exception
- void **tearDown** () throws Exception
- void **testGetType** ()
- void **testGetReference** ()
- void **testUpdateReference** () throws Exception
- void **testGetListStateRef_FromRandomSearch** ()
- void **testGetListStateRef_FromOtherGenerator** ()
- void **testGetSetters** ()
- void **testGetReferenceList** ()
- void **testGetListState** ()

The documentation for this class was generated from the following file:

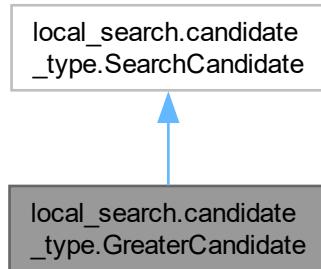
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/GeneticAlgorithmTest.java

5.48 local_search.candidate_type.GreaterCandidate Class Reference

Inheritance diagram for local_search.candidate_type.GreaterCandidate:



Collaboration diagram for local_search.candidate_type.GreaterCandidate:



Public Member Functions

- `State candidate (State stateReference, List< State > neighborhood)`

5.48.1 Member Function Documentation

5.48.1.1 candidate()

```
State local_search.candidate_type.GreaterCandidate.candidate (
    State stateReference,
    List< State > neighborhood)
```

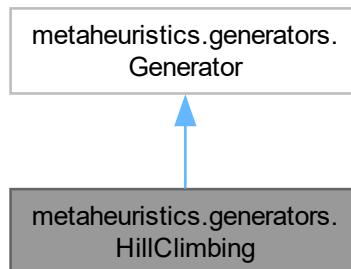
Implements `local_search.candidate_type.SearchCandidate`.

The documentation for this class was generated from the following file:

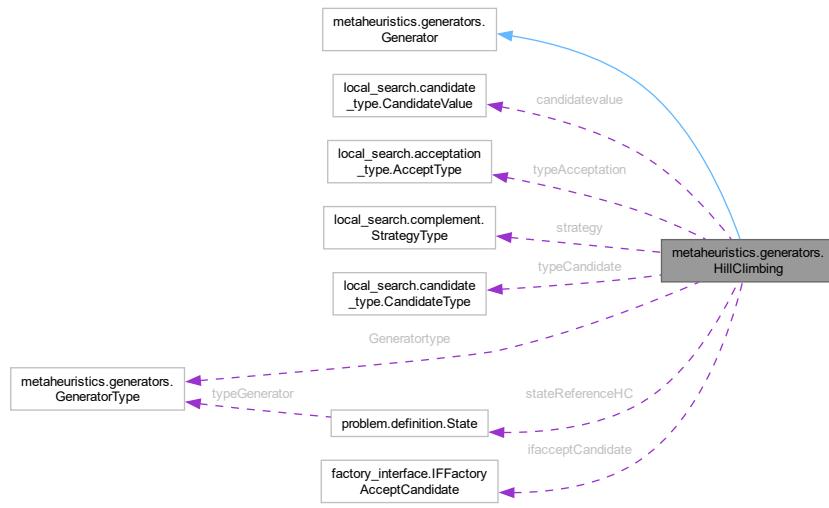
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/candidate_type/GreaterCandidate.java

5.49 metaheuristics.generators.HillClimbing Class Reference

Inheritance diagram for metaheuristics.generators.HillClimbing:



Collaboration diagram for metaheuristics.generators.HillClimbing:



Public Member Functions

- `State generate (Integer operatornumber)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- `void updateReference (State stateCandidate, Integer countIterationsCurrent)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- `List< State > getReferenceList ()`
- `State getReference ()`
- `void setStateRef (State stateRef)`
- `void setInitialReference (State stateInitialRef)`
- `GeneratorType getGeneratorType ()`
- `void setGeneratorType (GeneratorType Generatortype)`
- `GeneratorType getType ()`
- `List< State > getSonList ()`
- `void setTypeCandidate (CandidateType typeCandidate)`
- `boolean awardUpdateREF (State stateCandidate)`
- `float getWeight ()`
- `void setWeight (float weight)`
- `int[] getListCountBetterGender ()`
- `int[] getListCountGender ()`
- `float[] getTrace ()`

Static Public Attributes

- `static int countGender = 0`
- `static int countBetterGender = 0`

Protected Attributes

- CandidateValue `candidatevalue`
- AcceptType `typeAcceptation`
- StrategyType `strategy`
- CandidateType `typeCandidate`
- State `stateReferenceHC`
- IFFactoryAcceptCandidate `ifacceptCandidate`
- GeneratorType `Generatortype`
- List< State > `listStateReference` = new ArrayList<State>()
- float `weight`

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- int `countGender`
- int `countBetterGender`
- int[] `listCountBetterGender`

5.49.1 Member Function Documentation

5.49.1.1 awardUpdateREF()

```
boolean metaheuristics.generators.HillClimbing.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.49.1.2 generate()

```
State metaheuristics.generators.HillClimbing.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.49.1.3 getListCountBetterGender()

```
int[] metaheuristics.generators.HillClimbing.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.49.1.4 getListCountGender()

```
int[] metaheuristics.generators.HillClimbing.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.49.1.5 **getReference()**

```
State metaheuristics.generators.HillClimbing.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.49.1.6 **getReferenceList()**

```
List< State > metaheuristics.generators.HillClimbing.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.49.1.7 **getSonList()**

```
List< State > metaheuristics.generators.HillClimbing.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.49.1.8 **getTrace()**

```
float[ ] metaheuristics.generators.HillClimbing.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.49.1.9 **getType()**

```
GeneratorType metaheuristics.generators.HillClimbing.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.49.1.10 **getWeight()**

```
float metaheuristics.generators.HillClimbing.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.49.1.11 **setInitialReference()**

```
void metaheuristics.generators.HillClimbing.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.49.1.12 setWeight()

```
void metaheuristics.generators.HillClimbing.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.49.1.13 updateReference()

```
void metaheuristics.generators.HillClimbing.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

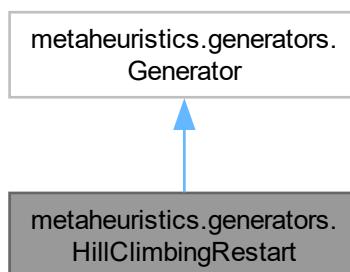
Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

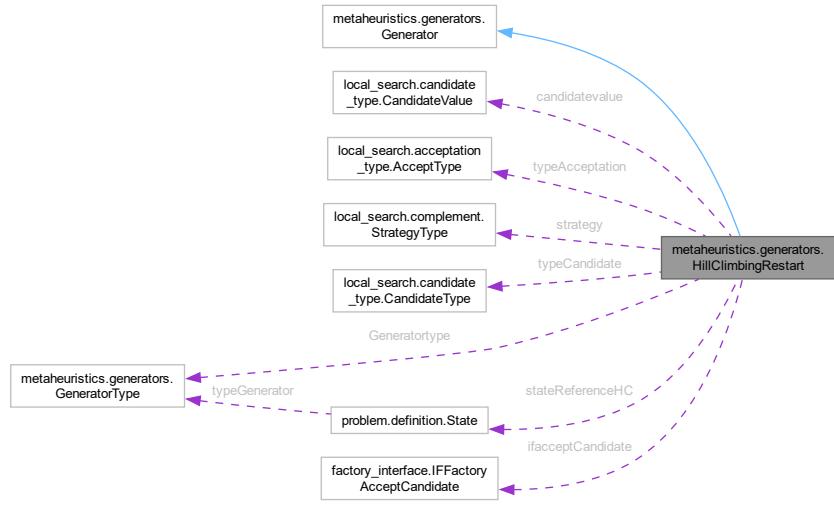
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/HillClimbing.java

5.50 metaheuristics.generators.HillClimbingRestart Class Reference

Inheritance diagram for metaheuristics.generators.HillClimbingRestart:



Collaboration diagram for metaheuristics.generators.HillClimbingRestart:



Public Member Functions

- **State generate** (Integer operatornumber) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException
 - void **updateReference** (State stateCandidate, Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException
 - List< State > **getReferenceList** ()
 - State **getReference** ()
 - void **setStateRef** (State stateRef)
 - void **setInitialReference** (State stateInitialRef)
 - GeneratorType **getGeneratorType** ()
 - void **setGeneratorType** (GeneratorType Generatortype)
 - GeneratorType **getType** ()
 - List< State > **getSonList** ()
 - void **setTypeCandidate** (CandidateType typeCandidate)
 - boolean **awardUpdateREF** (State stateCandidate)
 - float **getWeight** ()
 - void **setWeight** (float weight)
 - int[] **getListCountBetterGender** ()
 - int[] **getListCountGender** ()
 - float[] **getTrace** ()

Static Public Attributes

- static int **count**
 - static int **countCurrent**
 - static int **countGender** = 0
 - static int **countBetterGender** = 0

Protected Attributes

- CandidateValue `candidatevalue`
- AcceptType `typeAcceptation`
- StrategyType `strategy`
- CandidateType `typeCandidate`
- State `stateReferenceHC`
- IFFactoryAcceptCandidate `ifacceptCandidate`
- GeneratorType `Generatortype`
- List< State > `listStateReference` = new ArrayList<State>()
- float `weight`

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- int `countGender`
- int `countBetterGender`
- int[] `listCountBetterGender`

5.50.1 Member Function Documentation

5.50.1.1 awardUpdateREF()

```
boolean metaheuristics.generators.HillClimbingRestart.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.50.1.2 generate()

```
State metaheuristics.generators.HillClimbingRestart.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.50.1.3 getListCountBetterGender()

```
int[] metaheuristics.generators.HillClimbingRestart.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.50.1.4 getListCountGender()

```
int[] metaheuristics.generators.HillClimbingRestart.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.50.1.5 **getReference()**

```
State metaheuristics.generators.HillClimbingRestart.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.50.1.6 **getReferenceList()**

```
List< State > metaheuristics.generators.HillClimbingRestart.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.50.1.7 **getSonList()**

```
List< State > metaheuristics.generators.HillClimbingRestart.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.50.1.8 **getTrace()**

```
float[ ] metaheuristics.generators.HillClimbingRestart.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.50.1.9 **getType()**

```
GeneratorType metaheuristics.generators.HillClimbingRestart.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.50.1.10 **getWeight()**

```
float metaheuristics.generators.HillClimbingRestart.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.50.1.11 **setInitialReference()**

```
void metaheuristics.generators.HillClimbingRestart.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.50.1.12 setWeight()

```
void metaheuristics.generators.HillClimbingRestart.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.50.1.13 updateReference()

```
void metaheuristics.generators.HillClimbingRestart.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
Exception, NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/HillClimbingRestart.java

5.51 metaheuristics.generators.HillClimbingRestart Class Reference

Public Member Functions

- void **setUp** ()
- void **testInitialization** ()
- void **testGenerate_NoRestart** () throws Exception
- void **testGenerate_Restart** () throws Exception
- void **testUpdateReference** () throws Exception

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/HillClimbingRestartTest.java

5.52 metaheuristics.generators.HillClimbingTest Class Reference

Public Member Functions

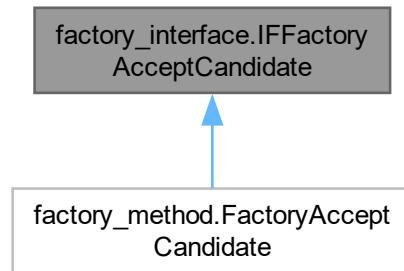
- void **setUp** () throws Exception
- void **tearDown** () throws Exception
- void **testGenerate** () throws Exception
- void **testSetAndGetReference** ()
- void **testGetType** ()
- void **testUpdateReference** () throws Exception
- void **testConstructorMaximizar** () throws Exception
- void **testGetReferenceList** ()
- void **testSetStateRef** ()
- void **testSetGeneratorType** ()
- void **testSetTypeCandidate** ()
- void **testGettersAndSetters** ()

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/HillClimbingTest.java

5.53 factory_interface.IFFactoryAcceptCandidate Interface Reference

Inheritance diagram for factory_interface.IFFactoryAcceptCandidate:



Public Member Functions

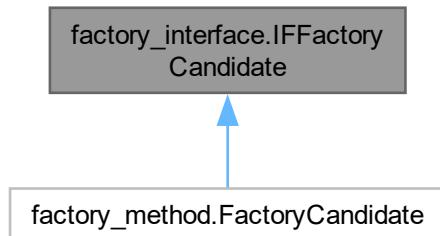
- `AcceptableCandidate createAcceptCandidate (AcceptType typeacceptation) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`

The documentation for this interface was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_interface/IFFactoryAcceptCandidate.java

5.54 factory_interface.IFFactoryCandidate Interface Reference

Inheritance diagram for factory_interface.IFFactoryCandidate:



Public Member Functions

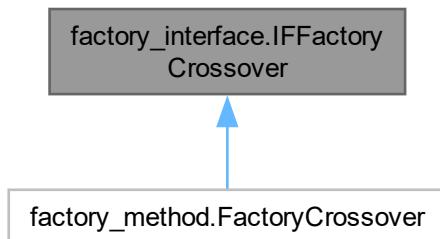
- `SearchCandidate createSearchCandidate (CandidateType typeCandidate) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`

The documentation for this interface was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_interface/IFFactoryCandidate.java

5.55 factory_interface.IFFactoryCrossover Interface Reference

Inheritance diagram for factory_interface.IFFactoryCrossover:



Public Member Functions

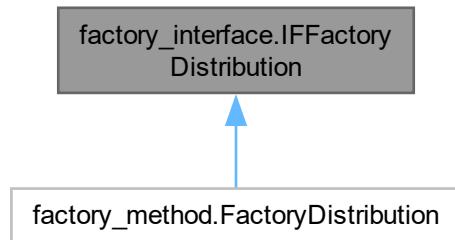
- `Crossover createCrossover (CrossoverType CrossoverType) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`

The documentation for this interface was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_interface/IFFactoryCrossover.java

5.56 factory_interface.IFFactoryDistribution Interface Reference

Inheritance diagram for factory_interface.IFFactoryDistribution:



Public Member Functions

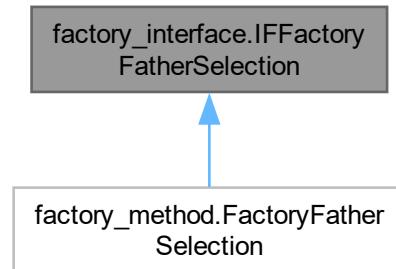
- `Distribution createDistribution (DistributionType typedistribution) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`

The documentation for this interface was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_interface/IFFactoryDistribution.java

5.57 factory_interface.IFFactoryFatherSelection Interface Reference

Inheritance diagram for factory_interface.IFFactoryFatherSelection:



Public Member Functions

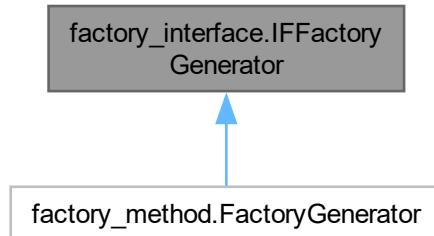
- **FatherSelection createSelectFather (SelectionType selectionType)** throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`

The documentation for this interface was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_interface/IFFactoryFatherSelection.java

5.58 factory_interface.IFFactoryGenerator Interface Reference

Inheritance diagram for factory_interface.IFFactoryGenerator:



Public Member Functions

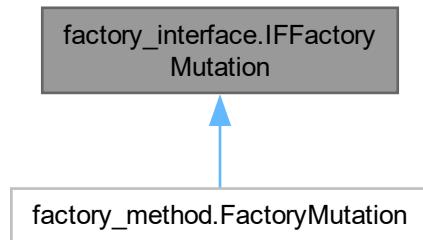
- **Generator createGenerator (GeneratorType Generatortype)** throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`

The documentation for this interface was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_interface/IFFactoryGenerator.java

5.59 factory_interface.IFFactoryMutation Interface Reference

Inheritance diagram for factory_interface.IFFactoryMutation:



Public Member Functions

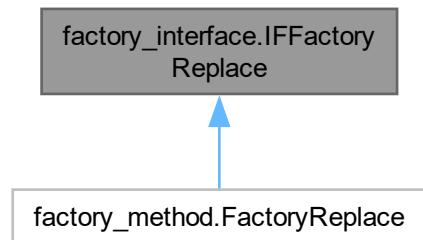
- `Mutation createMutation (MutationType typeMutation)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`

The documentation for this interface was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_interface/IFFactoryMutation.java

5.60 factory_interface.IFFactoryReplace Interface Reference

Inheritance diagram for factory_interface.IFFactoryReplace:



Public Member Functions

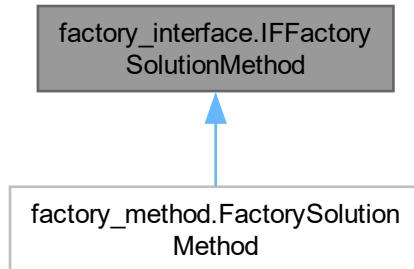
- **Replace** `createReplace (ReplaceType typereplace)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`

The documentation for this interface was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_interface/IFFactoryReplace.java

5.61 factory_interface.IFFactorySolutionMethod Interface Reference

Inheritance diagram for factory_interface.IFFactorySolutionMethod:



Public Member Functions

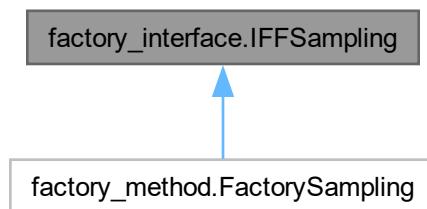
- **SolutionMethod** `createdSolutionMethod (TypeSolutionMethod method)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`

The documentation for this interface was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_interface/IFFactorySolutionMethod.java

5.62 factory_interface.IFFSampling Interface Reference

Inheritance diagram for factory_interface.IFFSampling:



Public Member Functions

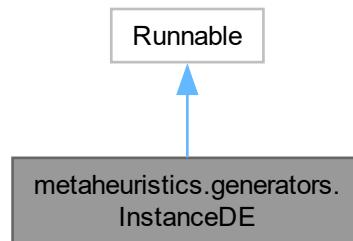
- `Sampling createSampling (SamplingType typesampling)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`

The documentation for this interface was generated from the following file:

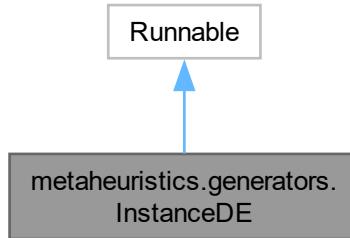
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/factory_interface/IFFSampling.java

5.63 metaheuristics.generators.InstanceDE Class Reference

Inheritance diagram for metaheuristics.generators.InstanceDE:



Collaboration diagram for metaheuristics.generators.InstanceDE:



Public Member Functions

- void **run** ()
- boolean **isTerminate** ()
- void **setTerminate** (boolean terminate)

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/InstanceDE.java

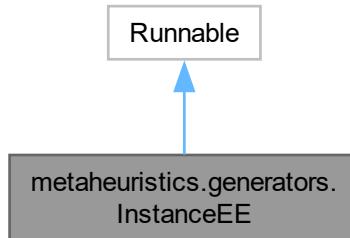
5.64 metaheuristics.generators.InstanceDE Class Reference

The documentation for this class was generated from the following file:

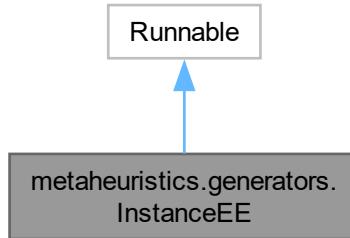
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/InstanceDETest.java

5.65 metaheuristics.generators.InstanceEE Class Reference

Inheritance diagram for metaheuristics.generators.InstanceEE:



Collaboration diagram for metaheuristics.generators.InstanceEE:



Public Member Functions

- void **run** ()
- boolean **isTerminate** ()
- void **setTerminate** (boolean terminate)

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/InstanceEE.java

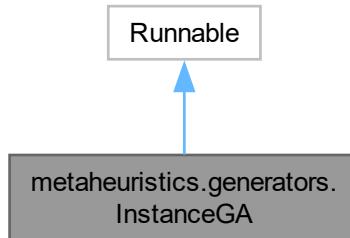
5.66 metaheuristics.generators.InstanceEETest Class Reference

The documentation for this class was generated from the following file:

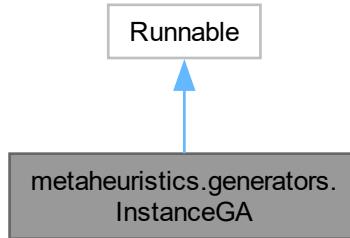
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/InstanceEETest.java

5.67 metaheuristics.generators.InstanceGA Class Reference

Inheritance diagram for metaheuristics.generators.InstanceGA:



Collaboration diagram for metaheuristics.generators.InstanceGA:



Public Member Functions

- void **run** ()
- boolean **isTerminate** ()
- void **setTerminate** (boolean terminate)

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/InstanceGA.java

5.68 metaheuristics.generators.InstanceGATest Class Reference

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/InstanceGATest.java

5.69 metaheuristics.generators.InstanceTest Class Reference

Public Member Functions

- void **testInstanceGA** ()
- void **testInstanceEE** ()
- void **testInstanceDE** ()

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/InstanceTest.java

5.70 metaheuristics.generators.LimitRoulette Class Reference

Public Member Functions

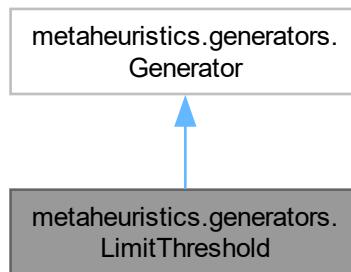
- `Generator getGenerator ()`
- `void setGenerator (Generator generator)`
- `float getLimitHigh ()`
- `void setLimitHigh (float limitHigh)`
- `float getLimitLow ()`
- `void setLimitLow (float limitLow)`

The documentation for this class was generated from the following file:

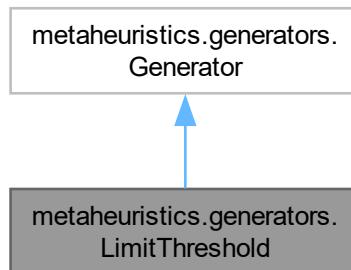
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/LimitRoulette.java

5.71 metaheuristics.generators.LimitThreshold Class Reference

Inheritance diagram for metaheuristics.generators.LimitThreshold:



Collaboration diagram for metaheuristics.generators.LimitThreshold:



Public Member Functions

- `GeneratorType getTypeGenerator ()`
- `void setTypeGenerator (GeneratorType typeGenerator)`
- `State generate (Integer operatornumber) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`
- `void updateReference (State stateCandidate, Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`
- `State getReference ()`
- `void setStateRef (State stateRef)`
- `void setInitialReference (State stateInitialRef)`
- `GeneratorType getType ()`
- `List< State > getReferenceList ()`
- `List< State > getSonList ()`
- `void setTypeCandidate (CandidateType typeCandidate)`
- `boolean awardUpdateREF (State stateCandidate)`
- `float getWeight ()`
- `void setWeight (float weight)`
- `int[] getListCountBetterGender ()`
- `int[] getListCountGender ()`
- `float[] getTrace ()`

Static Public Attributes

- `static int countGender = 0`
- `static int countBetterGender = 0`

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- `int countGender`
- `int countBetterGender`
- `int[] listCountBetterGender`

5.71.1 Member Function Documentation

5.71.1.1 awardUpdateREF()

```
boolean metaheuristics.generators.LimitThreshold.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.71.1.2 generate()

```
State metaheuristics.generators.LimitThreshold.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.71.1.3 getListCountBetterGender()

```
int[] metaheuristics.generators.LimitThreshold.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.71.1.4 getListCountGender()

```
int[] metaheuristics.generators.LimitThreshold.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.71.1.5 getReference()

```
State metaheuristics.generators.LimitThreshold.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.71.1.6 getReferenceList()

```
List< State > metaheuristics.generators.LimitThreshold.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.71.1.7 getSonList()

```
List< State > metaheuristics.generators.LimitThreshold.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.71.1.8 getTrace()

```
float[] metaheuristics.generators.LimitThreshold.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.71.1.9 `getType()`

```
GeneratorType metaheuristics.generators.LimitThreshold.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.71.1.10 `getWeight()`

```
float metaheuristics.generators.LimitThreshold.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.71.1.11 `setInitialReference()`

```
void metaheuristics.generators.LimitThreshold.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.71.1.12 `setWeight()`

```
void metaheuristics.generators.LimitThreshold.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.71.1.13 `updateReference()`

```
void metaheuristics.generators.LimitThreshold.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/LimitThreshold.java

5.72 metaheuristics.generators.LimitThresholdTest Class Reference

Public Member Functions

- void `setUp ()`
- void `testInitialization ()`
- void `testGenerate ()` throws Exception
- void `testUpdateReference ()` throws Exception

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/LimitThresholdTest.java

5.73 problem.extension.MetricasMultiobjetivo Class Reference

Public Member Functions

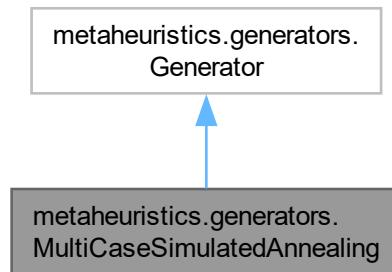
- double **TasaError** (List< State > solutionsFPcurrent, List< State > solutionsFPtrue) throws BiffException, IOException
- double **DistanciaGeneracional** (List< State > solutionsFPcurrent, List< State > solutionsFPtrue) throws BiffException, IOException
- double **Dispersion** (ArrayList< State > solutions) throws BiffException, IOException
- double **CalcularMin** (ArrayList< Double > allMetrics)
- double **CalcularMax** (ArrayList< Double > allMetrics)
- double **CalcularMedia** (ArrayList< Double > allMetrics)

The documentation for this class was generated from the following file:

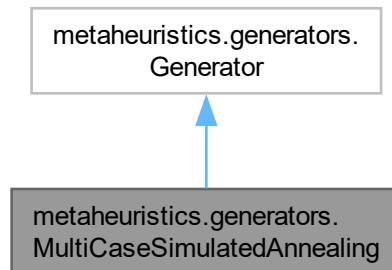
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/problem/extension/MetricasMultiobjetivo.java

5.74 metaheuristics.generators.MultiCaseSimulatedAnnealing Class Reference

Inheritance diagram for metaheuristics.generators.MultiCaseSimulatedAnnealing:



Collaboration diagram for metaheuristics.generators.MultiCaseSimulatedAnnealing:



Public Member Functions

- `GeneratorType getTypeGenerator ()`
- `void setTypeGenerator (GeneratorType typeGenerator)`
- `State generate (Integer operatornumber) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`
- `State getReference ()`
- `void setStateRef (State stateRef)`
- `void setInitialReference (State stateInitialRef)`
- `void updateReference (State stateCandidate, Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`
- `GeneratorType getType ()`
- `List< State > getReferenceList ()`
- `List< State > getSonList ()`
- `boolean awardUpdateREF (State stateCandidate)`
- `float getWeight ()`
- `void setWeight (float weight)`
- `int[] getCountBetterGender ()`
- `int[] getCountGender ()`
- `float[] getTrace ()`

Static Public Attributes

- `static Double alpha`
- `static Double tinitial`
- `static Double tfinal`
- `static int countIterationsT`

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- `int countGender`
- `int countBetterGender`
- `int[] listCountBetterGender`

5.74.1 Member Function Documentation

5.74.1.1 `awardUpdateREF()`

```
boolean metaheuristics.generators.MultiCaseSimulatedAnnealing.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.74.1.2 generate()

```
State metaheuristics.generators.MultiCaseSimulatedAnnealing.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.74.1.3 getListCountBetterGender()

```
int[] metaheuristics.generators.MultiCaseSimulatedAnnealing.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.74.1.4 getListCountGender()

```
int[] metaheuristics.generators.MultiCaseSimulatedAnnealing.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.74.1.5 getReference()

```
State metaheuristics.generators.MultiCaseSimulatedAnnealing.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.74.1.6 getReferenceList()

```
List< State > metaheuristics.generators.MultiCaseSimulatedAnnealing.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.74.1.7 getSonList()

```
List< State > metaheuristics.generators.MultiCaseSimulatedAnnealing.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.74.1.8 getTrace()

```
float[] metaheuristics.generators.MultiCaseSimulatedAnnealing.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.74.1.9 `getType()`

```
GeneratorType metaheuristics.generators.MultiCaseSimulatedAnnealing.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.74.1.10 `getWeight()`

```
float metaheuristics.generators.MultiCaseSimulatedAnnealing.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.74.1.11 `setInitialReference()`

```
void metaheuristics.generators.MultiCaseSimulatedAnnealing.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.74.1.12 `setWeight()`

```
void metaheuristics.generators.MultiCaseSimulatedAnnealing.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.74.1.13 `updateReference()`

```
void metaheuristics.generators.MultiCaseSimulatedAnnealing.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/MultiCaseSimulatedAnnealing.java

5.75 metaheuristics.generators.MultiCaseSimulatedAnnealingTest Class Reference

Public Member Functions

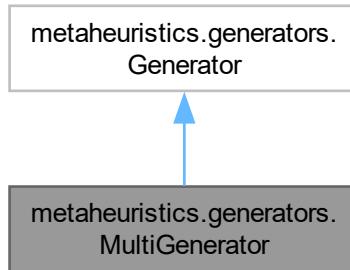
- void `setUp ()`
- void `testInitialization ()`
- void `testGenerate () throws Exception`
- void `testUpdateReference_Cooling () throws Exception`

The documentation for this class was generated from the following file:

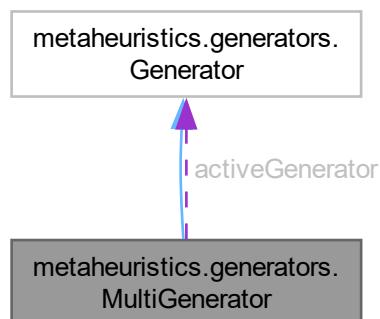
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/MultiCaseSimulatedAnnealingTest.java

5.76 metaheuristics.generators.MultiGenerator Class Reference

Inheritance diagram for metaheuristics.generators.MultiGenerator:



Collaboration diagram for metaheuristics.generators.MultiGenerator:



Public Member Functions

- void **setGeneratortype** (`GeneratorType generatortype`)
- `State generate` (`Integer operatornumber`) throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- `State getReference` ()
- `List< State > getReferenceList` ()
- `List< State > getSonList` ()
- `GeneratorType getType` ()
- void **setInitialReference** (`State statelInitialRef`)
- void **updateReference** (`State stateCandidate`, `Integer countIterationsCurrent`) throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`

- void **updateWeight** ([State](#) stateCandidate)
- boolean **searchState** ([State](#) stateCandidate)
- float [getWeight](#) ()
- [Generator](#) **roulette** ()
- boolean **awardUpdateREF** ([State](#) stateCandidate)
- void **updateAwardSC** ()
- void **updateAwardImp** ()
- void [setWeight](#) (float weight)
- float[] [getTrace](#) ()
- void **tournament** ([State](#) stateCandidate, Integer countIterationsCurrent) throws [IllegalArgumentException](#), [SecurityException](#), [ClassNotFoundException](#), [InstantiationException](#), [IllegalAccessException](#), [InvocationTargetException](#), [NoSuchMethodException](#)
- Object [clone](#) ()
- int[] [getListCountBetterGender](#) ()
- int[] [getListCountGender](#) ()

Static Public Member Functions

- static void **destroyMultiGenerator** ()
- static void **initializeListGenerator** () throws [IllegalArgumentException](#), [SecurityException](#), [ClassNotFoundException](#), [InstantiationException](#), [IllegalAccessException](#), [InvocationTargetException](#), [NoSuchMethodException](#)
- static void **initializeGenerators** () throws [IllegalArgumentException](#), [SecurityException](#), [ClassNotFoundException](#), [InstantiationException](#), [IllegalAccessException](#), [InvocationTargetException](#), [NoSuchMethodException](#)
- static void **createInstanceGeneratorsBPP** ()
- static [Generator](#)[] [getListGenerators](#) ()
- static void [setListGenerators](#) ([Generator](#)[] listGenerators)
- static [Generator](#) [getActiveGenerator](#) ()
- static void [setActiveGenerator](#) ([Generator](#) activeGenerator)
- static void [setListGeneratedPP](#) (List<[State](#)> listGeneratedPP)

Static Public Attributes

- static List<[State](#)> **listGeneratedPP** = new ArrayList<[State](#)> ()
- static [Generator](#) **activeGenerator**
- static List<[State](#)> **listStateReference** = new ArrayList<[State](#)>()

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- int **countGender**
- int **countBetterGender**
- int[] [listCountBetterGender](#)

5.76.1 Member Function Documentation

5.76.1.1 awardUpdateREF()

```
boolean metaheuristics.generators.MultiGenerator.awardUpdateREF (   
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.76.1.2 generate()

```
State metaheuristics.generators.MultiGenerator.generate (   
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←  
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,  
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.76.1.3 getListCountBetterGender()

```
int[ ] metaheuristics.generators.MultiGenerator.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.76.1.4 getListCountGender()

```
int[ ] metaheuristics.generators.MultiGenerator.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.76.1.5 getReference()

```
State metaheuristics.generators.MultiGenerator.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.76.1.6 getReferenceList()

```
List< State > metaheuristics.generators.MultiGenerator.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.76.1.7 getSonList()

```
List< State > metaheuristics.generators.MultiGenerator.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.76.1.8 getTrace()

```
float[ ] metaheuristics.generators.MultiGenerator.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.76.1.9 getType()

```
GeneratorType metaheuristics.generators.MultiGenerator.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.76.1.10 getWeight()

```
float metaheuristics.generators.MultiGenerator.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.76.1.11 setInitialReference()

```
void metaheuristics.generators.MultiGenerator.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.76.1.12 setWeight()

```
void metaheuristics.generators.MultiGenerator.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.76.1.13 updateReference()

```
void metaheuristics.generators.MultiGenerator.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/MultiGenerator.java

5.77 metaheuristics.generators.MultiGeneratorTest Class Reference

Public Member Functions

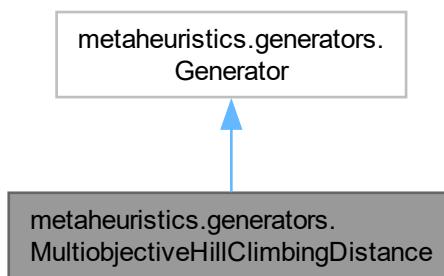
- void **setUp** () throws Exception
- void **tearDown** () throws Exception
- void **testGenerate** () throws Exception
- void **testUpdateReference** () throws Exception
- void **testGetType** ()
- void **testRoulette** ()
- void **testUpdateAwardSC** ()
- void **testUpdateAwardImp** ()
- void **testTournament** () throws Exception
- void **testInitializeGenerators** () throws Exception

The documentation for this class was generated from the following file:

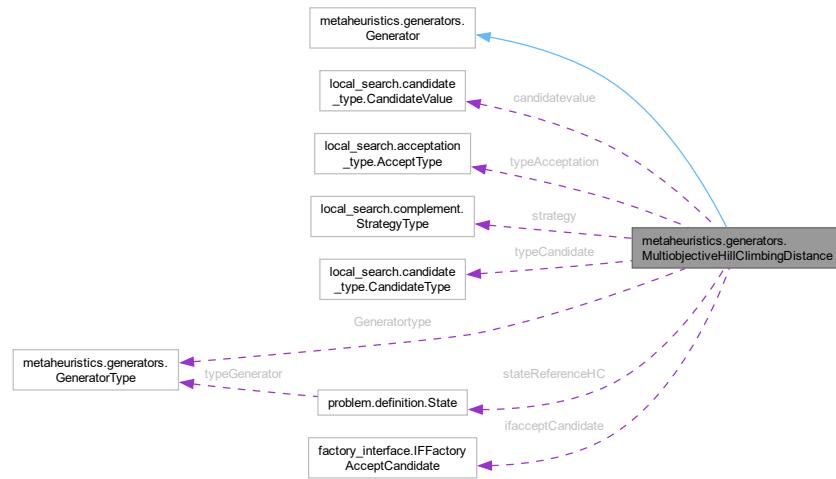
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/MultiGeneratorTest.java

5.78 metaheuristics.generators.MultiobjectiveHillClimbingDistance Class Reference

Inheritance diagram for metaheuristics.generators.MultiobjectiveHillClimbingDistance:



Collaboration diagram for metaheuristics.generators.MultiobjectiveHillClimbingDistance:



Public Member Functions

- **State generate (Integer operatornumber)** throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- void **updateReference (State stateCandidate, Integer countIterationsCurrent)** throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- List< **State > getReferenceList ()**
- **State getReference ()**
- void **setStateRef (State stateRef)**
- void **setInitialReference (State statelInitialRef)**
- **GeneratorType getGeneratorType ()**
- void **setGeneratorType (GeneratorType Generatortype)**
- **GeneratorType getType ()**
- List< **State > getSonList ()**
- boolean **awardUpdateREF (State stateCandidate)**
- float **getWeight ()**
- void **setWeight (float weight)**
- int[] **getListCountBetterGender ()**
- int[] **getListCountGender ()**
- float[] **getTrace ()**

Static Public Member Functions

- static List< Double > **DistanceCalculateAdd (List< State > solution)**

Static Public Attributes

- static int **sizeNeighbors**
- static List< Double > **distanceSolution** = new ArrayList<Double>()

Protected Attributes

- `CandidateValue candidatevalue`
- `AcceptType typeAcceptation`
- `StrategyType strategy`
- `CandidateType typeCandidate`
- `State stateReferenceHC`
- `IFFactoryAcceptCandidate ifacceptCandidate`
- `GeneratorType Generatortype`
- `List< State > listStateReference = new ArrayList<State>()`
- `float weight`
- `List< Float > listTrace = new ArrayList<Float>()`

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- `int countGender`
- `int countBetterGender`
- `int[] listCountBetterGender`

5.78.1 Member Function Documentation

5.78.1.1 awardUpdateREF()

```
boolean metaheuristics.generators.MultiobjectiveHillClimbingDistance.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.78.1.2 generate()

```
State metaheuristics.generators.MultiobjectiveHillClimbingDistance.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.78.1.3 getListCountBetterGender()

```
int[] metaheuristics.generators.MultiobjectiveHillClimbingDistance.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.78.1.4 getListCountGender()

```
int[ ] metaheuristics.generators.MultiobjectiveHillClimbingDistance.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.78.1.5 getReference()

```
State metaheuristics.generators.MultiobjectiveHillClimbingDistance.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.78.1.6 getReferenceList()

```
List< State > metaheuristics.generators.MultiobjectiveHillClimbingDistance.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.78.1.7 getSonList()

```
List< State > metaheuristics.generators.MultiobjectiveHillClimbingDistance.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.78.1.8 getTrace()

```
float[ ] metaheuristics.generators.MultiobjectiveHillClimbingDistance.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.78.1.9 getType()

```
GeneratorType metaheuristics.generators.MultiobjectiveHillClimbingDistance.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.78.1.10 getWeight()

```
float metaheuristics.generators.MultiobjectiveHillClimbingDistance.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.78.1.11 setInitialReference()

```
void metaheuristics.generators.MultiobjectiveHillClimbingDistance.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.78.1.12 `setWeight()`

```
void metaheuristics.generators.MultiobjectiveHillClimbingDistance.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.78.1.13 `updateReference()`

```
void metaheuristics.generators.MultiobjectiveHillClimbingDistance.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/MultiobjectiveHillClimbingDistance.java

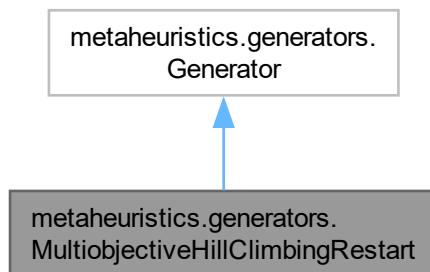
5.79 **metaheuristics.generators.MultiobjectiveHillClimbingDistanceTest Class Reference**

The documentation for this class was generated from the following file:

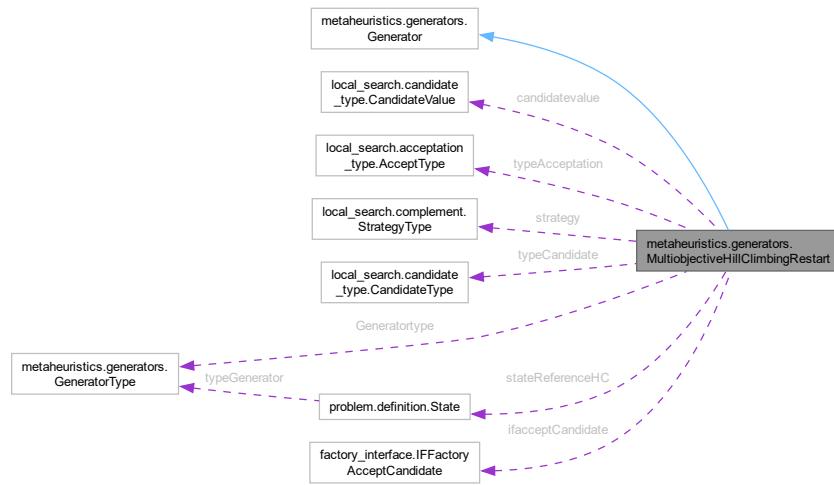
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/MultiobjectiveHillClimbingDistanceTest.java

5.80 **metaheuristics.generators.MultiobjectiveHillClimbingRestart Class Reference**

Inheritance diagram for `metaheuristics.generators.MultiobjectiveHillClimbingRestart`:



Collaboration diagram for metaheuristics.generators.MultiobjectiveHillClimbingRestart:



Public Member Functions

- **State generate (Integer operatornumber)** throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- **void updateReference (State stateCandidate, Integer countIterationsCurrent)** throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- **List< State > getReferenceList ()**
- **State getReference ()**
- **void setStateRef (State stateRef)**
- **void setInitialReference (State stateInitialRef)**
- **GeneratorType getGeneratorType ()**
- **void setGeneratorType (GeneratorType Generatortype)**
- **GeneratorType getType ()**
- **List< State > getSonList ()**
- **boolean awardUpdateREF (State stateCandidate)**
- **float getWeight ()**
- **void setWeight (float weight)**
- **float[] getTrace ()**
- **int[] getListCountBetterGender ()**
- **int[] getListCountGender ()**

Static Public Attributes

- static int **sizeNeighbors**

Protected Attributes

- `CandidateValue candidatevalue`
- `AcceptType typeAcceptation`
- `StrategyType strategy`
- `CandidateType typeCandidate`
- `State stateReferenceHC`
- `IFFactoryAcceptCandidate ifacceptCandidate`
- `GeneratorType Generatortype`
- `List< State > listStateReference = new ArrayList<State>()`
- `float weight`
- `List< Float > listTrace = new ArrayList<Float>()`

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- `int countGender`
- `int countBetterGender`
- `int[] listCountBetterGender`

5.80.1 Member Function Documentation

5.80.1.1 awardUpdateREF()

```
boolean metaheuristics.generators.MultiobjectiveHillClimbingRestart.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.80.1.2 generate()

```
State metaheuristics.generators.MultiobjectiveHillClimbingRestart.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.80.1.3 getListCountBetterGender()

```
int[] metaheuristics.generators.MultiobjectiveHillClimbingRestart.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.80.1.4 getListCountGender()

```
int[ ] metaheuristics.generators.MultiobjectiveHillClimbingRestart.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.80.1.5 getReference()

```
State metaheuristics.generators.MultiobjectiveHillClimbingRestart.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.80.1.6 getReferenceList()

```
List< State > metaheuristics.generators.MultiobjectiveHillClimbingRestart.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.80.1.7 getSonList()

```
List< State > metaheuristics.generators.MultiobjectiveHillClimbingRestart.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.80.1.8 getTrace()

```
float[ ] metaheuristics.generators.MultiobjectiveHillClimbingRestart.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.80.1.9 getType()

```
GeneratorType metaheuristics.generators.MultiobjectiveHillClimbingRestart.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.80.1.10 getWeight()

```
float metaheuristics.generators.MultiobjectiveHillClimbingRestart.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.80.1.11 setInitialReference()

```
void metaheuristics.generators.MultiobjectiveHillClimbingRestart.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.80.1.12 `setWeight()`

```
void metaheuristics.generators.MultiobjectiveHillClimbingRestart.setWeight ( float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.80.1.13 `updateReference()`

```
void metaheuristics.generators.MultiobjectiveHillClimbingRestart.updateReference ( State stateCandidate, Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/MultiobjectiveHillClimbingRestart.java

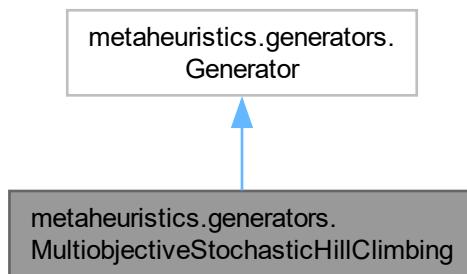
5.81 `metaheuristics.generators.MultiobjectiveHillClimbingRestartTest` Class Reference

The documentation for this class was generated from the following file:

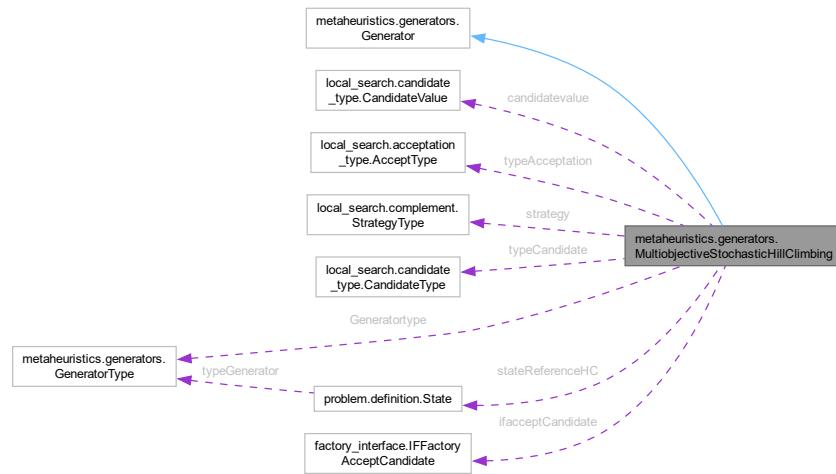
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/MultiobjectiveHillClimbingRestartTest.java

5.82 `metaheuristics.generators.MultiobjectiveStochasticHillClimbing` Class Reference

Inheritance diagram for `metaheuristics.generators.MultiobjectiveStochasticHillClimbing`:



Collaboration diagram for metaheuristics.generators.MultiobjectiveStochasticHillClimbing:



Public Member Functions

- `State generate (Integer operatornumber)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- `void updateReference (State stateCandidate, Integer countIterationsCurrent)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- `List< State > getReferenceList ()`
- `State getReference ()`
- `void setStateRef (State stateRef)`
- `void setInitialReference (State statelInitialRef)`
- `GeneratorType getGeneratorType ()`
- `void setGeneratorType (GeneratorType Generatortype)`
- `GeneratorType getType ()`
- `List< State > getSonList ()`
- `boolean awardUpdateREF (State stateCandidate)`
- `float getWeight ()`
- `void setWeight (float weight)`
- `float[] getTrace ()`
- `int[] getListCountBetterGender ()`
- `int[] getListCountGender ()`

Protected Attributes

- `CandidateValue candidatevalue`
- `AcceptType typeAcceptation`
- `StrategyType strategy`
- `CandidateType typeCandidate`
- `State stateReferenceHC`
- `IFFactoryAcceptCandidate ifacceptCandidate`
- `GeneratorType Generatortype`
- `List< State > listStateReference = new ArrayList<State>()`
- `float weight`
- `List< Float > listTrace = new ArrayList<Float>()`

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- int **countGender**
- int **countBetterGender**
- int[] **listCountBetterGender**

5.82.1 Member Function Documentation

5.82.1.1 **awardUpdateREF()**

```
boolean metaheuristics.generators.MultiobjectiveStochasticHillClimbing.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.82.1.2 **generate()**

```
State metaheuristics.generators.MultiobjectiveStochasticHillClimbing.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.82.1.3 **getListCountBetterGender()**

```
int[] metaheuristics.generators.MultiobjectiveStochasticHillClimbing.getListCountBetterGender
()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.82.1.4 **getListCountGender()**

```
int[] metaheuristics.generators.MultiobjectiveStochasticHillClimbing.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.82.1.5 **getReference()**

```
State metaheuristics.generators.MultiobjectiveStochasticHillClimbing.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.82.1.6 **getReferenceList()**

```
List< State > metaheuristics.generators.MultiobjectiveStochasticHillClimbing.getReferenceList  
()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.82.1.7 **getSonList()**

```
List< State > metaheuristics.generators.MultiobjectiveStochasticHillClimbing.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.82.1.8 **getTrace()**

```
float[ ] metaheuristics.generators.MultiobjectiveStochasticHillClimbing.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.82.1.9 **getType()**

```
GeneratorType metaheuristics.generators.MultiobjectiveStochasticHillClimbing.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.82.1.10 **getWeight()**

```
float metaheuristics.generators.MultiobjectiveStochasticHillClimbing.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.82.1.11 **setInitialReference()**

```
void metaheuristics.generators.MultiobjectiveStochasticHillClimbing.setInitialReference (  
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.82.1.12 **setWeight()**

```
void metaheuristics.generators.MultiobjectiveStochasticHillClimbing.setWeight (  
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.82.1.13 updateReference()

```
void metaheuristics.generators.MultiobjectiveStochasticHillClimbing.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/MultiobjectiveStochasticHillClimbing.java

5.83 metaheuristics.generators.MultiobjectiveStochasticHillClimbing Test Class Reference

Public Member Functions

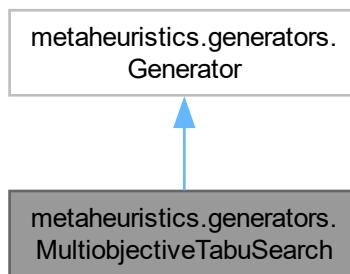
- void **setUp** ()
- void **testInitialization** ()
- void **testGenerate** () throws Exception
- void **testUpdateReference** () throws Exception

The documentation for this class was generated from the following file:

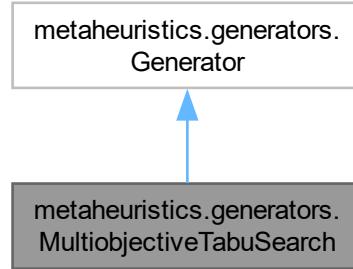
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/MultiobjectiveStochasticHillClimbingTest.java

5.84 metaheuristics.generators.MultiobjectiveTabuSearch Class Reference

Inheritance diagram for metaheuristics.generators.MultiobjectiveTabuSearch:



Collaboration diagram for metaheuristics.generators.MultiobjectiveTabuSearch:



Public Member Functions

- `State getStateReferenceTS ()`
- `void setStateReferenceTS (State stateReferenceTS)`
- `GeneratorType getTypeGenerator ()`
- `void setTypeGenerator (GeneratorType typeGenerator)`
- `State generate (Integer operatornumber) throws IllegalArgumentException, SecurityException, ClassNotFoundException, NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`
- `void updateReference (State stateCandidate, Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`
- `GeneratorType getType ()`
- `List< State > getReferenceList ()`
- `State getReference ()`
- `void setInitialReference (State stateInitialRef)`
- `void setStateRef (State stateRef)`
- `List< State > getSonList ()`
- `void setTypeCandidate (CandidateType typeCandidate)`
- `boolean awardUpdateREF (State stateCandidate)`
- `float getWeight ()`
- `void setWeight (float weight)`
- `int[] getCountBetterGender ()`
- `int[] getCountGender ()`
- `float[] getTrace ()`

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- `int countGender`
- `int countBetterGender`
- `int[] listCountBetterGender`

5.84.1 Member Function Documentation

5.84.1.1 awardUpdateREF()

```
boolean metaheuristics.generators.MultiobjectiveTabuSearch.awardUpdateREF (
```

`State stateCandidate)`

Reimplemented from [metaheuristics.generators.Generator](#).

5.84.1.2 generate()

```
State metaheuristics.generators.MultiobjectiveTabuSearch.generate (
```

`Integer operatornumber) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`

Reimplemented from [metaheuristics.generators.Generator](#).

5.84.1.3 getListCountBetterGender()

```
int[ ] metaheuristics.generators.MultiobjectiveTabuSearch.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.84.1.4 getListCountGender()

```
int[ ] metaheuristics.generators.MultiobjectiveTabuSearch.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.84.1.5 getReference()

```
State metaheuristics.generators.MultiobjectiveTabuSearch.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.84.1.6 getReferenceList()

```
List< State > metaheuristics.generators.MultiobjectiveTabuSearch.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.84.1.7 getSonList()

```
List< State > metaheuristics.generators.MultiobjectiveTabuSearch.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.84.1.8 getTrace()

```
float[ ] metaheuristics.generators.MultiobjectiveTabuSearch.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.84.1.9 getType()

```
GeneratorType metaheuristics.generators.MultiobjectiveTabuSearch.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.84.1.10 getWeight()

```
float metaheuristics.generators.MultiobjectiveTabuSearch.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.84.1.11 setInitialReference()

```
void metaheuristics.generators.MultiobjectiveTabuSearch.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.84.1.12 setWeight()

```
void metaheuristics.generators.MultiobjectiveTabuSearch.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.84.1.13 updateReference()

```
void metaheuristics.generators.MultiobjectiveTabuSearch.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

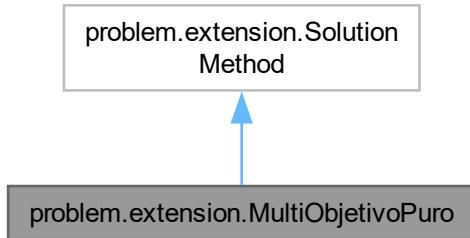
Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

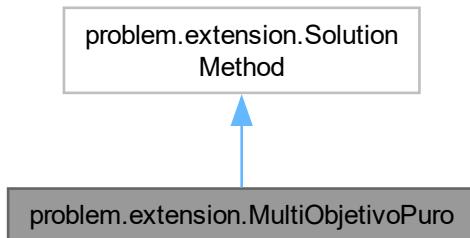
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/MultiobjectiveTabuSearch.java

5.85 problem.extension.MultiObjetivoPuro Class Reference

Inheritance diagram for problem.extension.MultiObjetivoPuro:



Collaboration diagram for problem.extension.MultiObjetivoPuro:



Public Member Functions

- void [evaluationState](#) ([State](#) state)

5.85.1 Member Function Documentation

5.85.1.1 [evaluationState\(\)](#)

```
void problem.extension.MultiObjetivoPuro.evaluationState (   
    State state)
```

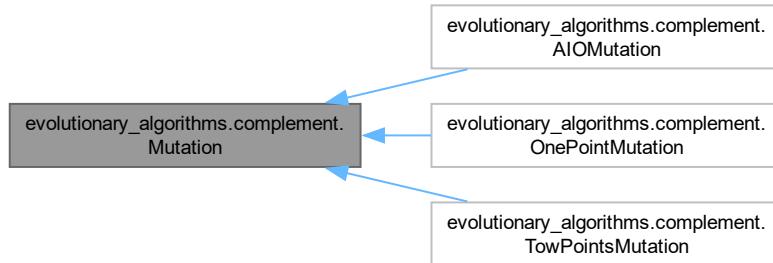
Reimplemented from [problem.extension.SolutionMethod](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/problem/extension/MultiObjetivoPuro.java

5.86 evolutionary_algorithms.complement.Mutation Class Reference

Inheritance diagram for evolutionary_algorithms.complement.Mutation:



Public Member Functions

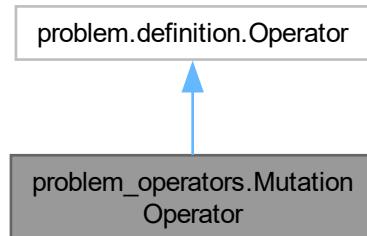
- abstract `State mutation (State state, double PM)`

The documentation for this class was generated from the following file:

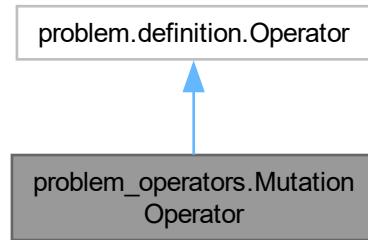
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/Mutation.java

5.87 problem_operators.MutationOperator Class Reference

Inheritance diagram for problem_operators.MutationOperator:



Collaboration diagram for problem_operators.MutationOperator:



Public Member Functions

- List< [State](#) > [generatedNewState](#) ([State](#) stateCurrent, Integer operatornumber)
- List< [State](#) > [generateRandomState](#) (Integer operatornumber)

5.87.1 Member Function Documentation

5.87.1.1 [generatedNewState\(\)](#)

```
List< State > problem_operators.MutationOperator.generatedNewState (
    State stateCurrent,
    Integer operatornumber)
```

Reimplemented from [problem.definition.Operator](#).

5.87.1.2 [generateRandomState\(\)](#)

```
List< State > problem_operators.MutationOperator.generateRandomState (
    Integer operatornumber)
```

Reimplemented from [problem.definition.Operator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/problem_operators/MutationOperator.java

5.88 problem_operators.MutationOperatorTest Class Reference

Public Member Functions

- void **setUp** ()
- void **testGeneratedNewState** ()
- void **testGenerateRandomState** ()

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/problem_operators/MutationOperatorTest.java

5.89 evolutionary_algorithms.complement.MutationType Enum Reference

Public Attributes

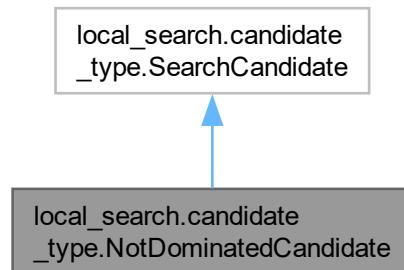
- **TowPointsMutation**
- **OnePointMutation**
- **AIOMutation**

The documentation for this enum was generated from the following file:

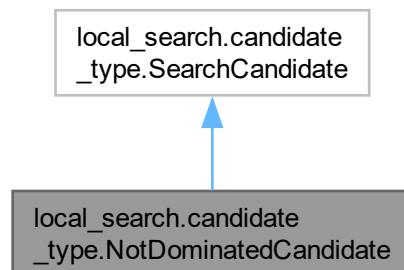
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/MutationType.java

5.90 local_search.candidate_type.NotDominatedCandidate Class Reference

Inheritance diagram for local_search.candidate_type.NotDominatedCandidate:



Collaboration diagram for local_search.candidate_type.NotDominatedCandidate:



Public Member Functions

- **State candidate (State stateReference, List< State > neighborhood)**

5.90.1 Member Function Documentation

5.90.1.1 candidate()

```
State local_search.candidate_type.NotDominatedCandidate.candidate (
    State stateReference,
    List< State > neighborhood)
```

Implements [local_search.candidate_type.SearchCandidate](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/candidate_type/NotDominatedCandidate.java

5.91 problem.definition.ObjetiveFunction Class Reference

Public Member Functions

- float **getWeight ()**
- void **setWeight (float weight)**
- **ProblemType getTypeProblem ()**
- void **setTypeProblem (ProblemType typeProblem)**
- abstract Double **Evaluation (State state)**

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/problem/definition/ObjetiveFunction.java

5.92 problem.definition.ObjetiveFunctionTest Class Reference

Public Member Functions

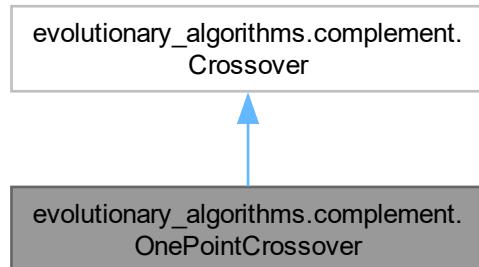
- void **testGettersAndSetters ()**

The documentation for this class was generated from the following file:

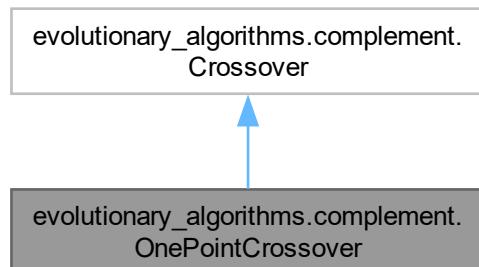
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/problem/definition/ObjetiveFunctionTest.java

5.93 evolutionary_algorithms.complement.OnePointCrossover Class Reference

Inheritance diagram for evolutionary_algorithms.complement.OnePointCrossover:



Collaboration diagram for evolutionary_algorithms.complement.OnePointCrossover:



Public Member Functions

- `State crossover (State father1, State father2, double PC)`

5.93.1 Member Function Documentation

5.93.1.1 `crossover()`

```
State evolutionary_algorithms.complement.OnePointCrossover.crossover (
    State father1,
```

```
State father2,  
double PC)
```

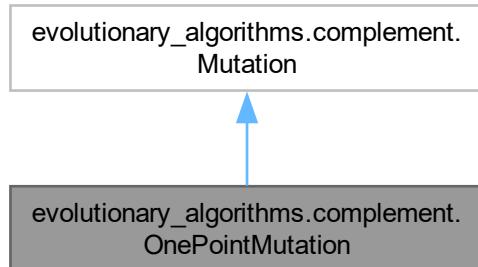
Reimplemented from [evolutionary_algorithms.complement.Crossover](#).

The documentation for this class was generated from the following file:

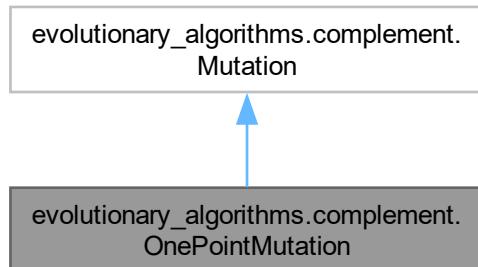
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/OnePointCrossover.java

5.94 evolutionary_algorithms.complement.OnePointMutation Class Reference

Inheritance diagram for `evolutionary_algorithms.complement.OnePointMutation`:



Collaboration diagram for `evolutionary_algorithms.complement.OnePointMutation`:



Public Member Functions

- `State mutation (State state, double PM)`

5.94.1 Member Function Documentation

5.94.1.1 mutation()

```
State evolutionary_algorithms.complement.OnePointMutation.mutation (
    State state,
    double PM)
```

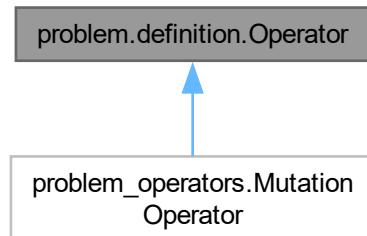
Reimplemented from [evolutionary_algorithms.complement.Mutation](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/OnePointMutation.java

5.95 problem.definition.Operator Class Reference

Inheritance diagram for problem.definition.Operator:



Public Member Functions

- abstract List<[State](#)> **generatedNewState** ([State](#) stateCurrent, Integer operatornumber)
- abstract List<[State](#)> **generateRandomState** (Integer operatornumber)

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/problem/definition/Operator.java

5.96 problem.definition.OperatorTest Class Reference

Public Member Functions

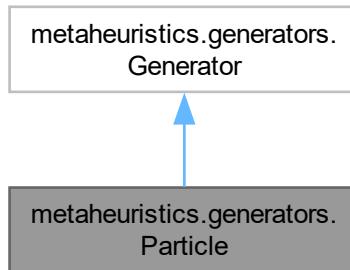
- void **testAbstractImplementation** ()

The documentation for this class was generated from the following file:

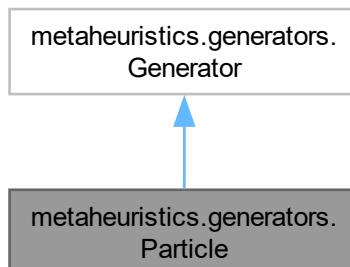
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/problem/definition/OperatorTest.java

5.97 metaheuristics.generators.Particle Class Reference

Inheritance diagram for metaheuristics.generators.Particle:



Collaboration diagram for metaheuristics.generators.Particle:



Public Member Functions

- **Particle** ([State](#) statePBest, [State](#) stateActual, [ArrayList< Object >](#) velocity)
- [ArrayList< Object >](#) **getVelocity** ()
- void **setVelocity** ([ArrayList< Object >](#) velocity)
- [State](#) **getStatePBest** ()
- void **setStatePBest** ([State](#) statePBest)
- [State](#) **getStateActual** ()
- void **setStateActual** ([State](#) stateActual)
- [State](#) **generate** ([Integer](#) operatornumber) throws [IllegalArgumentException](#), [SecurityException](#), [ClassNotFoundException](#), [InstantiationException](#), [IllegalAccessException](#), [InvocationTargetException](#), [NoSuchMethodException](#)
- void **updateReference** ([State](#) stateCandidate, [Integer](#) countIterationsCurrent) throws [IllegalArgumentException](#), [SecurityException](#), [ClassNotFoundException](#), [InstantiationException](#), [IllegalAccessException](#), [InvocationTargetException](#), [NoSuchMethodException](#)

- `State getReference ()`
- `void setInitialReference (State stateInitialRef)`
- `GeneratorType getType ()`
- `List< State > getReferenceList ()`
- `List< State > getSonList ()`
- `boolean awardUpdateREF (State stateCandidate)`
- `void setWeight (float weight)`
- `float getWeight ()`
- `float[] getTrace ()`
- `int[] getListCountBetterGender ()`
- `int[] getListCountGender ()`

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- `int countGender`
- `int countBetterGender`
- `int[] listCountBetterGender`

5.97.1 Member Function Documentation

5.97.1.1 awardUpdateREF()

```
boolean metaheuristics.generators.Particle.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.97.1.2 generate()

```
State metaheuristics.generators.Particle.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.97.1.3 getListCountBetterGender()

```
int[] metaheuristics.generators.Particle.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.97.1.4 getListCountGender()

```
int[] metaheuristics.generators.Particle.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.97.1.5 **getReference()**

```
State metaheuristics.generators.Particle.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.97.1.6 **getReferenceList()**

```
List< State > metaheuristics.generators.Particle.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.97.1.7 **getSonList()**

```
List< State > metaheuristics.generators.Particle.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.97.1.8 **getTrace()**

```
float[ ] metaheuristics.generators.Particle.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.97.1.9 **getType()**

```
GeneratorType metaheuristics.generators.Particle.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.97.1.10 **getWeight()**

```
float metaheuristics.generators.Particle.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.97.1.11 **setInitialReference()**

```
void metaheuristics.generators.Particle.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.97.1.12 setWeight()

```
void metaheuristics.generators.Particle.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.97.1.13 updateReference()

```
void metaheuristics.generators.Particle.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

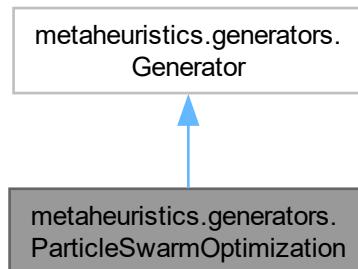
Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

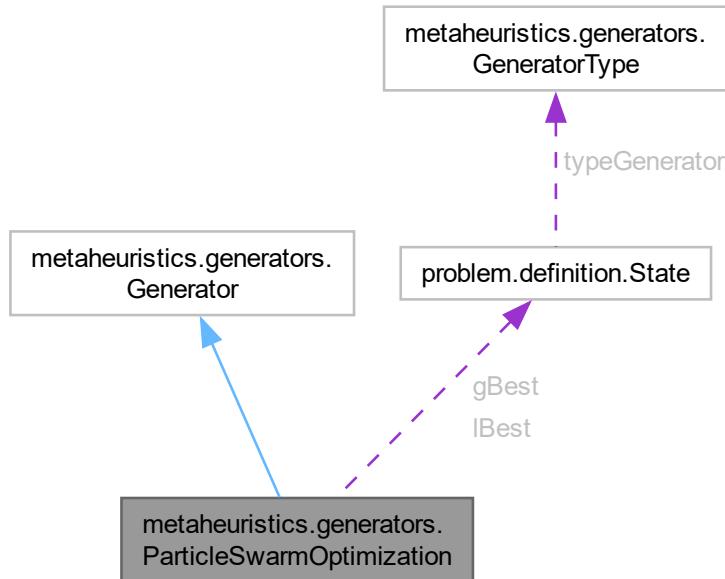
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/Particle.java

5.98 metaheuristics.generators.ParticleSwarmOptimization Class Reference

Inheritance diagram for metaheuristics.generators.ParticleSwarmOptimization:



Collaboration diagram for metaheuristics.generators.ParticleSwarmOptimization:



Public Member Functions

- **State generate (Integer operatornumber)** throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- **void inicialiceIBest ()**
- **State getReference ()**
- **State getStateReferencePSO ()**
- **void setStateReferencePSO (State stateReferencePSO)**
- **List< Particle > getListStateReference ()**
- **void setListStateReference (List< State > listStateReference)**
- **List< Particle > getListParticle ()**
- **List< Particle > setListParticle (List< Particle > listParticle)**
- **GeneratorType getGeneratorType ()**
- **void setGeneratorType (GeneratorType generatorType)**
- **void updateReference (State stateCandidate, Integer countIterationsCurrent)** throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- **State gBestInitial ()**
- **void setInitialReference (State statInitialRef)**
- **GeneratorType getType ()**
- **List< State > getReferenceList ()**
- **List< State > getSonList ()**
- **boolean awardUpdateREF (State stateCandidate)**
- **void setWeight (float weight)**
- **float getWeight ()**
- **int[] getListCountBetterGender ()**
- **int[] getListCountGender ()**
- **float[] getTrace ()**

Static Public Member Functions

- static int **getCountRef** ()
- static void **setCountRef** (int countRef)

Static Public Attributes

- static int **countRef** = 0
- static int **countParticle** = 0
- static int **coutSwarm** = 0
- static int **countParticleBySwarm** = 0
- static double **wmax** = 0.9
- static double **wmin** = 0.2
- static int **learning1** = 2
- static int **learning2** = 2
- static double **constriction**
- static boolean **binary** = false
- static [State](#)[] **IBest**
- static [State](#) **gBest**
- static int **countCurrentIterPSO**
- static int **countGender** = 0
- static int **countBetterGender** = 0

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- int **countGender**
- int **countBetterGender**
- int[] **listCountBetterGender**

5.98.1 Member Function Documentation

5.98.1.1 **awardUpdateREF()**

```
boolean metaheuristics.generators.ParticleSwarmOptimization.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.98.1.2 **generate()**

```
State metaheuristics.generators.ParticleSwarmOptimization.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.98.1.3 **getListCountBetterGender()**

```
int[ ] metaheuristics.generators.ParticleSwarmOptimization.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.98.1.4 **getListCountGender()**

```
int[ ] metaheuristics.generators.ParticleSwarmOptimization.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.98.1.5 **getReference()**

```
State metaheuristics.generators.ParticleSwarmOptimization.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.98.1.6 **getReferenceList()**

```
List< State > metaheuristics.generators.ParticleSwarmOptimization.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.98.1.7 **getSonList()**

```
List< State > metaheuristics.generators.ParticleSwarmOptimization.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.98.1.8 **getTrace()**

```
float[ ] metaheuristics.generators.ParticleSwarmOptimization.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.98.1.9 **getType()**

```
GeneratorType metaheuristics.generators.ParticleSwarmOptimization.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.98.1.10 **getWeight()**

```
float metaheuristics.generators.ParticleSwarmOptimization.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.98.1.11 setInitialReference()

```
void metaheuristics.generators.ParticleSwarmOptimization.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.98.1.12 setWeight()

```
void metaheuristics.generators.ParticleSwarmOptimization.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.98.1.13 updateReference()

```
void metaheuristics.generators.ParticleSwarmOptimization.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
Exception, NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/ParticleSwarmOptimization.java

5.99 metaheuristics.generators.ParticleSwarmOptimizationTest Class Reference

Public Member Functions

- void **setUp** () throws Exception
- void **tearDown** () throws Exception
- void **testGenerate** () throws Exception
- void **testGetType** ()
- void **testUpdateReference** () throws Exception
- void **testInicialiceLBest_Maximizar** ()
- void **testInicialiceLBest_Minimizar** ()
- void **testGetListStateRef_FromRandomSearch** () throws Exception
- void **testGBestInicial_Maximizar** ()
- void **testGBestInicial_Minimizar** ()
- void **testUpdateReference_Maximizar** () throws Exception

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/ParticleSwarmOptimizationTest.java

5.100 metaheuristics.generators.ParticleTest Class Reference

Public Member Functions

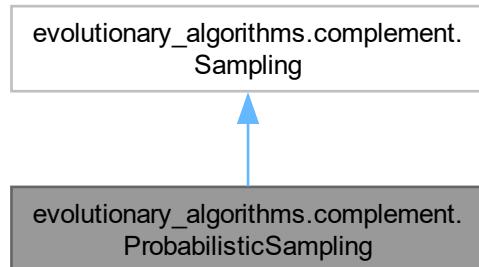
- void **setUp** ()
- void **testInitialization** ()
- void **testUpdateReference_Maximization_Improvement** () throws Exception
- void **testUpdateReference_Minimization_Improvement** () throws Exception
- void **testGenerate** () throws Exception

The documentation for this class was generated from the following file:

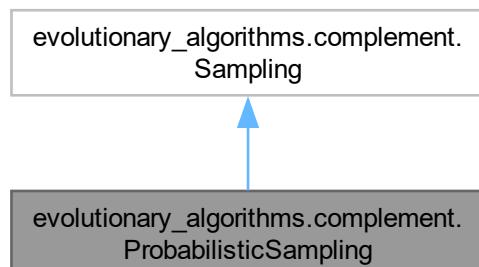
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/ParticleTest.java

5.101 evolutionary_algorithms.complement.ProbabilisticSampling Class Reference

Inheritance diagram for evolutionary_algorithms.complement.ProbabilisticSampling:



Collaboration diagram for evolutionary_algorithms.complement.ProbabilisticSampling:



Public Member Functions

- List< [State](#) > **sampling** (List< [State](#) > fathers, int countInd)
- List< [State](#) > **listState** (int countInd)

5.101.1 Member Function Documentation

5.101.1.1 **sampling()**

```
List< State > evolutionary_algorithms.complement.ProbabilisticSampling.sampling (
    List< State > fathers,
    int countInd)
```

Reimplemented from [evolutionary_algorithms.complement.Sampling](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/ProbabilisticSampling.java

5.102 evolutionary_algorithms.complement.Probability Class Reference

Public Member Functions

- **Probability** (Probability probability)
- **Probability** (Object key, Object value, float probability)
- float **getProbability** ()
- void **setProbability** (float probability)
- Object **getKey** ()
- void **setKey** (Object key)
- Object **getValue** ()
- void **setValue** (Object value)

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/Probability.java

5.103 problem.definition.Problem Class Reference

Classes

- enum [ProblemType](#)

Public Member Functions

- ArrayList< [ObjetiveFunction](#) > **getFunction** ()
- void **setFunction** (ArrayList< [ObjetiveFunction](#) > function)
- [State](#) **getState** ()
- void **setState** ([State](#) state)
- [ProblemType](#) **getTypeProblem** ()
- void **setTypeProblem** ([ProblemType](#) typeProblem)
- [Codification](#) **getCodification** ()
- void **setCodification** ([Codification](#) codification)
- [Operator](#) **getOperator** ()
- void **setOperator** ([Operator](#) operator)
- int **getPossibleValue** ()
- void **setPossibleValue** (int possibleValue)
- void **Evaluate** ([State](#) state) throws [IllegalArgumentException](#), [SecurityException](#), [ClassNotFoundException](#), [InstantiationException](#), [IllegalAccessException](#), [InvocationTargetException](#), [NoSuchMethodException](#)
- [TypeSolutionMethod](#) **getTypeSolutionMethod** ()
- void **setTypeSolutionMethod** ([TypeSolutionMethod](#) typeSolutionMethod)
- [IFFactorySolutionMethod](#) **getFactorySolutionMethod** ()
- void **setFactorySolutionMethod** ([IFFactorySolutionMethod](#) factorySolutionMethod)
- [SolutionMethod](#) **newSolutionMethod** ([TypeSolutionMethod](#) typeSolutionMethod) throws [IllegalArgumentException](#), [SecurityException](#), [ClassNotFoundException](#), [InstantiationException](#), [IllegalAccessException](#), [InvocationTargetException](#), [NoSuchMethodException](#)

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/problem/definition/Problem.java

5.104 problem.definition.ProblemTest Class Reference

Public Member Functions

- void **setUp** ()
- void **testGettersAndSetters** ()
- void **testEvaluateWithoutSolutionMethod** () throws Exception
- void **testEvaluateWithSolutionMethod** () throws Exception

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/problem/definition/ProblemTest.java

5.105 problem.definition.Problem.ProblemType Enum Reference

Public Attributes

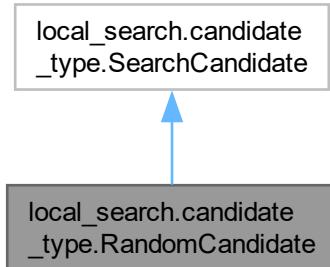
- **Maximizar**
- **Minimizar**

The documentation for this enum was generated from the following file:

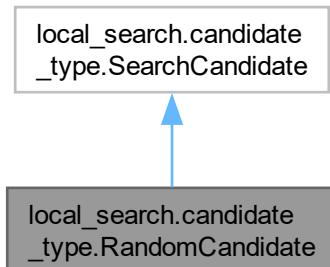
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/problem/definition/Problem.java

5.106 local_search.candidate_type.RandomCandidate Class Reference

Inheritance diagram for local_search.candidate_type.RandomCandidate:



Collaboration diagram for local_search.candidate_type.RandomCandidate:



Public Member Functions

- `State candidate (State stateReference, List< State > neighborhood)`

5.106.1 Member Function Documentation

5.106.1.1 candidate()

```
State local_search.candidate_type.RandomCandidate.candidate (
    State stateReference,
    List< State > neighborhood)
```

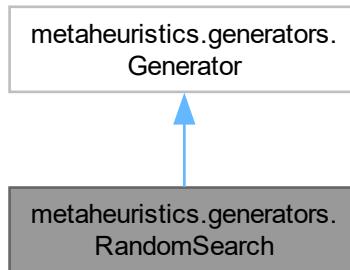
Implements [local_search.candidate_type.SearchCandidate](#).

The documentation for this class was generated from the following file:

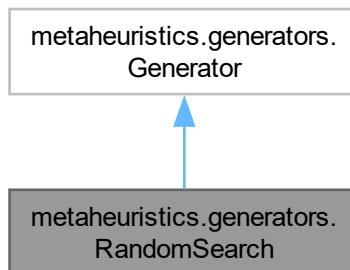
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/candidate_type/RandomCandidate.java

5.107 metaheuristics.generators.RandomSearch Class Reference

Inheritance diagram for metaheuristics.generators.RandomSearch:



Collaboration diagram for metaheuristics.generators.RandomSearch:



Public Member Functions

- `State generate (Integer operatornumber)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- `State getReference ()`
- `void setInitialReference (State stateInitialRef)`
- `void updateReference (State stateCandidate, Integer countIterationsCurrent)` throws `IllegalArgumentException`, `SecurityException`, `ClassNotFoundException`, `InstantiationException`, `IllegalAccessException`, `InvocationTargetException`, `NoSuchMethodException`
- `GeneratorType getType ()`
- `GeneratorType getTypeGenerator ()`
- `void setTypeGenerator (GeneratorType typeGenerator)`
- `List< State > getReferenceList ()`
- `List< State > getSonList ()`

- boolean `awardUpdateREF (State stateCandidate)`
- float `getWeight ()`
- void `setWeight (float weight)`
- int[] `getListCountBetterGender ()`
- int[] `getListCountGender ()`
- float[] `getTrace ()`

Static Public Attributes

- static List< `State` > `listStateReference` = new ArrayList<`State`>()
- static int `countGender` = 0
- static int `countBetterGender` = 0

Additional Inherited Members

Public Attributes inherited from `metaheuristics.generators.Generator`

- int `countGender`
- int `countBetterGender`
- int[] `listCountBetterGender`

5.107.1 Member Function Documentation

5.107.1.1 `awardUpdateREF()`

```
boolean metaheuristics.generators.RandomSearch.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from `metaheuristics.generators.Generator`.

5.107.1.2 `generate()`

```
State metaheuristics.generators.RandomSearch.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from `metaheuristics.generators.Generator`.

5.107.1.3 `getListCountBetterGender()`

```
int[] metaheuristics.generators.RandomSearch.getListCountBetterGender ()
```

Reimplemented from `metaheuristics.generators.Generator`.

5.107.1.4 **getListCountGender()**

```
int[ ] metaheuristics.generators.RandomSearch.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.107.1.5 **getReference()**

```
State metaheuristics.generators.RandomSearch.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.107.1.6 **getReferenceList()**

```
List< State > metaheuristics.generators.RandomSearch.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.107.1.7 **getSonList()**

```
List< State > metaheuristics.generators.RandomSearch.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.107.1.8 **getTrace()**

```
float[ ] metaheuristics.generators.RandomSearch.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.107.1.9 **getType()**

```
GeneratorType metaheuristics.generators.RandomSearch.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.107.1.10 **getWeight()**

```
float metaheuristics.generators.RandomSearch.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.107.1.11 **setInitialReference()**

```
void metaheuristics.generators.RandomSearch.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.107.1.12 setWeight()

```
void metaheuristics.generators.RandomSearch.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.107.1.13 updateReference()

```
void metaheuristics.generators.RandomSearch.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/RandomSearch.java

5.108 metaheuristics.generators.RandomSearchTest Class Reference

Public Member Functions

- void **setUp** ()
- void **testInitialization** ()
- void **testSetGetWeight** ()
- void **testGenerate** () throws Exception
- void **testUpdateReference** () throws Exception

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/RandomSearchTest.java

5.109 evolutionary_algorithms.complement.Range Class Reference

Public Member Functions

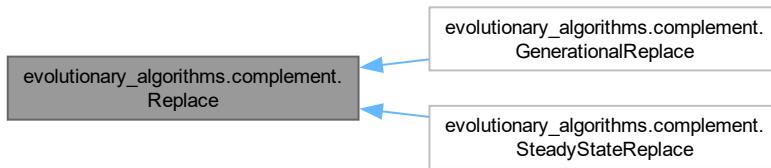
- [Probability getData](#) ()
- void **setData** ([Probability](#) data)
- float **getMax** ()
- void **setMax** (float max)
- float **getMin** ()
- void **setMin** (float min)

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/Range.java

5.110 evolutionary_algorithms.complement.Replace Class Reference

Inheritance diagram for evolutionary_algorithms.complement.Replace:



Public Member Functions

- abstract List< State > **replace** (State stateCandidate, List< State >listState) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/Replace.java

5.111 evolutionary_algorithms.complement.ReplaceType Enum Reference

Public Attributes

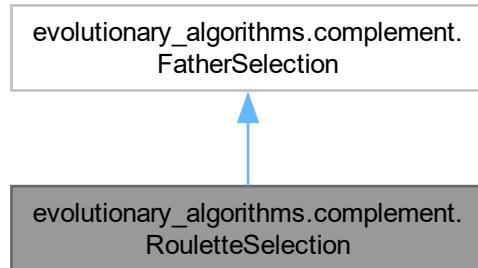
- **SteadyStateReplace**
- **GenerationalReplace**

The documentation for this enum was generated from the following file:

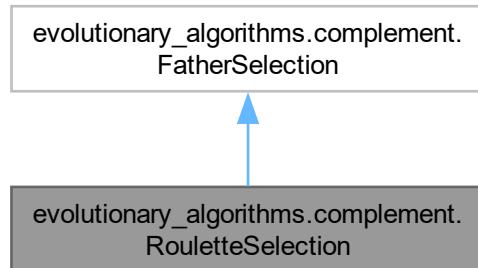
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/ReplaceType.java

5.112 evolutionary_algorithms.complement.RouletteSelection Class Reference

Inheritance diagram for evolutionary_algorithms.complement.RouletteSelection:



Collaboration diagram for evolutionary_algorithms.complement.RouletteSelection:



Public Member Functions

- `List< State > selection (List< State > listState, int truncation)`

5.112.1 Member Function Documentation

5.112.1.1 selection()

```
List< State > evolutionary_algorithms.complement.RouletteSelection.selection (
```

```
    List< State > listState,
```

```
    int truncation)
```

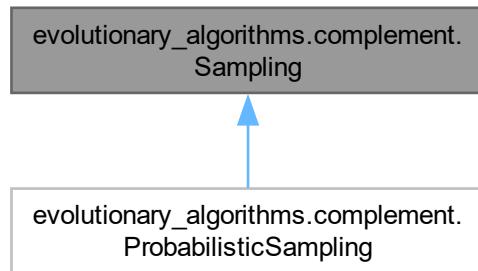
Reimplemented from [evolutionary_algorithms.complement.FatherSelection](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/RouletteSelection.java

5.113 evolutionary_algorithms.complement.Sampling Class Reference

Inheritance diagram for evolutionary_algorithms.complement.Sampling:



Public Member Functions

- abstract List<`State`> **sampling** (List<`State`> fathers, int countInd)

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/Sampling.java

5.114 evolutionary_algorithms.complement.SamplingType Enum Reference

Public Attributes

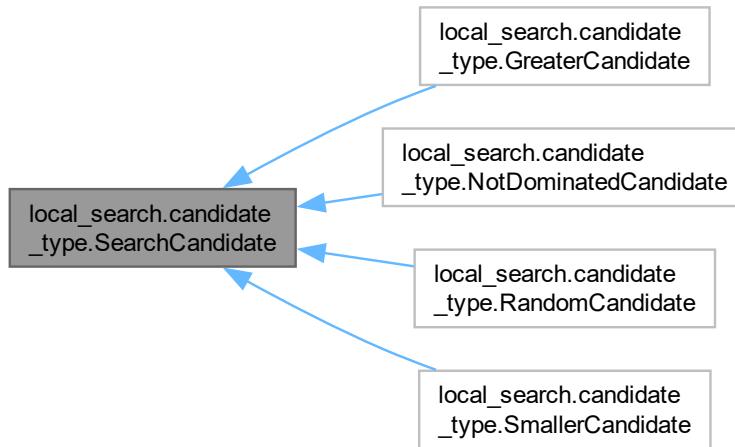
- **ProbabilisticSampling**

The documentation for this enum was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/SamplingType.java

5.115 local_search.candidate_type.SearchCandidate Interface Reference

Inheritance diagram for local_search.candidate_type.SearchCandidate:



Public Member Functions

- **State candidate** (`State` stateReference, `List< State >` neighborhood)

The documentation for this interface was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/candidate_type/SearchCandidate.java

5.116 evolutionary_algorithms.complement.SelectionType Enum Reference

Public Attributes

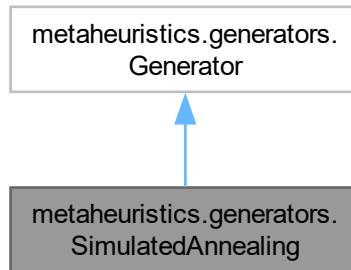
- **RouletteSelection**
- **TruncationSelection**

The documentation for this enum was generated from the following file:

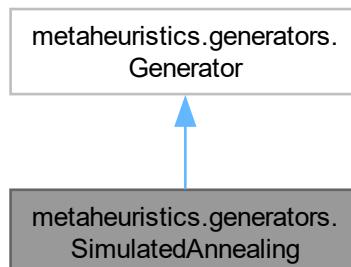
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/SelectionType.java

5.117 metaheuristics.generators.SimulatedAnnealing Class Reference

Inheritance diagram for metaheuristics.generators.SimulatedAnnealing:



Collaboration diagram for metaheuristics.generators.SimulatedAnnealing:



Public Member Functions

- `GeneratorType getTypeGenerator ()`
- `void setTypeGenerator (GeneratorType typeGenerator)`
- `State generate (Integer operatornumber) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`
- `State getReference ()`
- `void setStateRef (State stateRef)`
- `void setInitialReference (State stateInitialRef)`
- `void updateReference (State stateCandidate, Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`
- `GeneratorType getType ()`
- `List< State > getReferenceList ()`

- List< [State](#) > [getSonList](#) ()
- boolean [awardUpdateREF](#) ([State](#) stateCandidate)
- float [getWeight](#) ()
- void [setWeight](#) (float weight)
- int[] [getListCountBetterGender](#) ()
- int[] [getListCountGender](#) ()
- float[] [getTrace](#) ()

Static Public Attributes

- static Double **alpha**
- static Double **tinitial**
- static Double **tfinal**
- static int **countIterationsT**
- static int **countGender** = 0
- static int **countBetterGender** = 0

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- int **countGender**
- int **countBetterGender**
- int[] **listCountBetterGender**

5.117.1 Member Function Documentation

5.117.1.1 [awardUpdateREF\(\)](#)

```
boolean metaheuristics.generators.SimulatedAnnealing.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.117.1.2 [generate\(\)](#)

```
State metaheuristics.generators.SimulatedAnnealing.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.117.1.3 [getListCountBetterGender\(\)](#)

```
int[] metaheuristics.generators.SimulatedAnnealing.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.117.1.4 **getListCountGender()**

```
int[ ] metaheuristics.generators.SimulatedAnnealing.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.117.1.5 **getReference()**

```
State metaheuristics.generators.SimulatedAnnealing.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.117.1.6 **getReferenceList()**

```
List< State > metaheuristics.generators.SimulatedAnnealing.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.117.1.7 **getSonList()**

```
List< State > metaheuristics.generators.SimulatedAnnealing.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.117.1.8 **getTrace()**

```
float[ ] metaheuristics.generators.SimulatedAnnealing.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.117.1.9 **getType()**

```
GeneratorType metaheuristics.generators.SimulatedAnnealing.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.117.1.10 **getWeight()**

```
float metaheuristics.generators.SimulatedAnnealing.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.117.1.11 **setInitialReference()**

```
void metaheuristics.generators.SimulatedAnnealing.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.117.1.12 setWeight()

```
void metaheuristics.generators.SimulatedAnnealing.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.117.1.13 updateReference()

```
void metaheuristics.generators.SimulatedAnnealing.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/SimulatedAnnealing.java

5.118 metaheuristics.generators.SimulatedAnnealingTest Class Reference

Public Member Functions

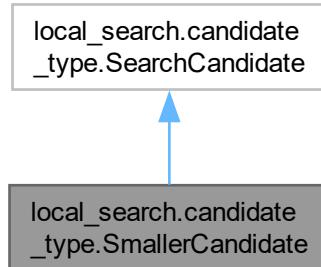
- void **setUp** ()
- void **testInitialization** ()
- void **testGenerate** () throws Exception
- void **testUpdateReference_Accept** () throws Exception
- void **testGetReferenceList** ()
- void **testUpdateReference_CoolingSchedule** () throws Exception

The documentation for this class was generated from the following file:

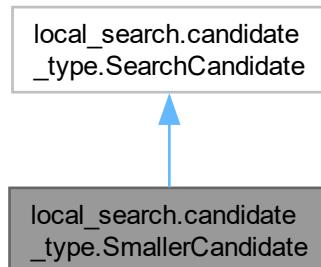
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/SimulatedAnnealingTest.java

5.119 local_search.candidate_type.SmallerCandidate Class Reference

Inheritance diagram for local_search.candidate_type.SmallerCandidate:



Collaboration diagram for local_search.candidate_type.SmallerCandidate:



Public Member Functions

- `State candidate (State stateReference, List< State > neighborhood)`

5.119.1 Member Function Documentation

5.119.1.1 candidate()

```
State local_search.candidate_type.SmallerCandidate.candidate (
    State stateReference,
    List< State > neighborhood)
```

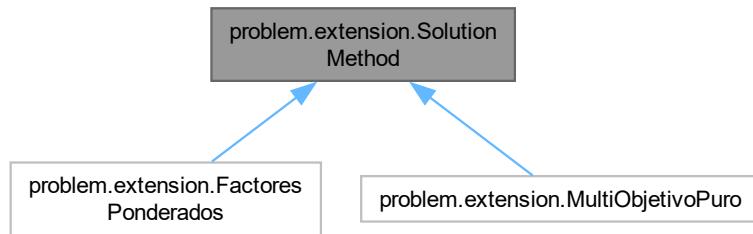
Implements [local_search.candidate_type.SearchCandidate](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/candidate_type/SmallerCandidate.java

5.120 problem.extension.SolutionMethod Class Reference

Inheritance diagram for problem.extension.SolutionMethod:



Public Member Functions

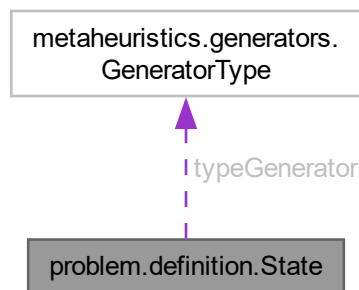
- abstract void **evaluationState** ([State](#) state)

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/problem/extension/SolutionMethod.java

5.121 problem.definition.State Class Reference

Collaboration diagram for problem.definition.State:



Public Member Functions

- **State** (State ps)
- **State** (ArrayList< Object > code)
- ArrayList< Object > **getCode** ()
- void **setCode** (ArrayList< Object > listCode)
- **GeneratorType getTypeGenerator** ()
- void **setTypeGenerator** (**GeneratorType** typeGenerator)
- ArrayList< Double > **getEvaluation** ()
- void **setEvaluation** (ArrayList< Double > evaluation)
- int **getNumber** ()
- void **setNumber** (int number)
- State **clone** ()
- Object **getCopy** ()
- boolean **Comparator** (State state)
- double **Distance** (State state)

Protected Attributes

- **GeneratorType typeGenerator**
- ArrayList< Double > **evaluation**
- int **number**
- ArrayList< Object > **code**

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/problem/definition/State.java

5.122 problem.definition.StateTest Class Reference

Public Member Functions

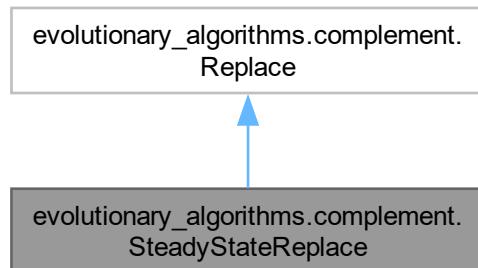
- void **testStateInitialization** ()
- void **testSettersAndGetters** ()
- void **testDistance** ()
- void **testComparator** ()
- void **testCloneAndCopy** ()

The documentation for this class was generated from the following file:

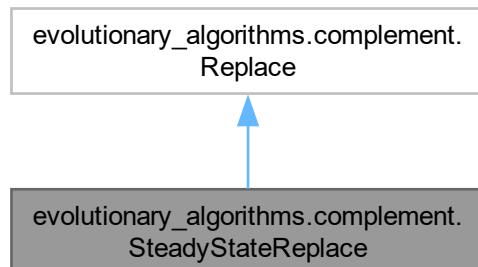
- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/problem/definition/StateTest.java

5.123 evolutionary_algorithms.complement.SteadyStateReplace Class Reference

Inheritance diagram for evolutionary_algorithms.complement.SteadyStateReplace:



Collaboration diagram for evolutionary_algorithms.complement.SteadyStateReplace:



Public Member Functions

- `List< State > replace (State stateCandidate, List< State > listState)`
- `State MinValue (List< State > listState)`
- `State MaxValue (List< State > listState)`

5.123.1 Member Function Documentation

5.123.1.1 replace()

```
List< State > evolutionary_algorithms.complement.SteadyStateReplace.replace (
    State stateCandidate,
    List< State > listState)
```

Reimplemented from [evolutionary_algorithms.complement.Replace](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/SteadyStateReplace.java

5.124 local_search.complement.StopExecute Interface Reference

Public Member Functions

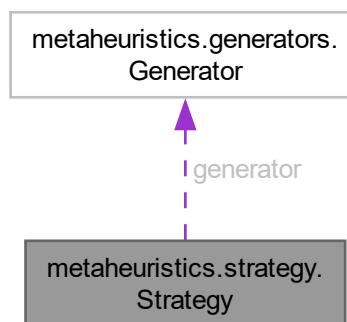
- boolean **stopIterations** (int current, int max)

The documentation for this interface was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/complement/StopExecute.java

5.125 metaheuristics.strategy.Strategy Class Reference

Collaboration diagram for metaheuristics.strategy.Strategy:



Public Member Functions

- **Problem getProblem ()**
- void **setProblem (Problem problem)**
- int **getCountMax ()**
- void **setCountMax (int countMax)**
- int **getCountCurrent ()**
- void **setCountCurrent (int countCurrent)**
- List< String > **getListKey ()**
- void **setListKey (List< String > listKey)**
- **State getBestState ()**

Static Public Member Functions

- static Strategy **getStrategy** ()
- static void **reset** ()

Public Attributes

- List< **State** > **listRefPoblacFinal** = new ArrayList<>()
- List< **State** > **listBest** = new ArrayList<>()
- Map< **GeneratorType**, **Generator** > **mapGenerators** = new HashMap<>()
- **Generator generator**
- List< **State** > **listStates**

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/strategy/Strategy.java

5.126 metaheuristics.strategy.StrategyTest Class Reference

Public Member Functions

- void **setUp** ()
- void **testSingleton** ()
- void **testGetSetProblem** ()
- void **testGetSetCountMax** ()
- void **testGetSetCountCurrent** ()
- void **testGetSetListKey** ()
- void **testListsInitialization** ()
- void **testGetBestState** ()
- void **testPublicFields** ()

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/strategy/StrategyTest.java

5.127 local_search.complement.StrATEGYType Enum Reference

Public Attributes

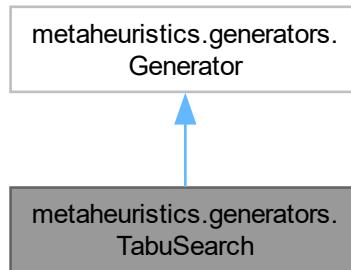
- **NORMAL**
- **TABU**

The documentation for this enum was generated from the following file:

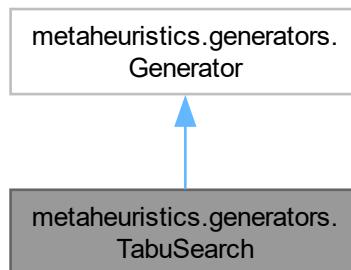
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/complement/StrategyType.java

5.128 metaheuristics.generators.TabuSearch Class Reference

Inheritance diagram for metaheuristics.generators.TabuSearch:



Collaboration diagram for metaheuristics.generators.TabuSearch:



Public Member Functions

- [`GeneratorType getTypeGenerator \(\)`](#)
- [`void setTypeGenerator \(GeneratorType typeGenerator\)`](#)
- [`State generate \(Integer operatornumber\) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`](#)
- [`State getReference \(\)`](#)
- [`void setInitialReference \(State statelinitialRef\)`](#)
- [`void setStateRef \(State stateRef\)`](#)
- [`void updateReference \(State stateCandidate, Integer countIterationsCurrent\) throws IllegalArgumentException, SecurityException, ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException, NoSuchMethodException`](#)
- [`GeneratorType getType \(\)`](#)
- [`List< State > getReferenceList \(\)`](#)

- List< [State](#) > [getSonList](#) ()
- void [setTypeCandidate](#) ([CandidateType](#) typeCandidate)
- boolean [awardUpdateREF](#) ([State](#) stateCandidate)
- float [getWeight](#) ()
- void [setWeight](#) (float weight)
- int[] [getListCountBetterGender](#) ()
- int[] [getListCountGender](#) ()
- float[] [getTrace](#) ()

Static Public Attributes

- static int [countGender](#) = 0
- static int [countBetterGender](#) = 0

Additional Inherited Members

Public Attributes inherited from [metaheuristics.generators.Generator](#)

- int [countGender](#)
- int [countBetterGender](#)
- int[] [listCountBetterGender](#)

5.128.1 Member Function Documentation

5.128.1.1 [awardUpdateREF\(\)](#)

```
boolean metaheuristics.generators.TabuSearch.awardUpdateREF (
    State stateCandidate)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.128.1.2 [generate\(\)](#)

```
State metaheuristics.generators.TabuSearch.generate (
    Integer operatornumber) throws IllegalArgumentException, SecurityException, Class←
NotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.128.1.3 [getListCountBetterGender\(\)](#)

```
int[] metaheuristics.generators.TabuSearch.getListCountBetterGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.128.1.4 **getListCountGender()**

```
int[ ] metaheuristics.generators.TabuSearch.getListCountGender ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.128.1.5 **getReference()**

```
State metaheuristics.generators.TabuSearch.getReference ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.128.1.6 **getReferenceList()**

```
List< State > metaheuristics.generators.TabuSearch.getReferenceList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.128.1.7 **getSonList()**

```
List< State > metaheuristics.generators.TabuSearch.getSonList ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.128.1.8 **getTrace()**

```
float[ ] metaheuristics.generators.TabuSearch.getTrace ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.128.1.9 **getType()**

```
GeneratorType metaheuristics.generators.TabuSearch.getType ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.128.1.10 **getWeight()**

```
float metaheuristics.generators.TabuSearch.getWeight ()
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.128.1.11 **setInitialReference()**

```
void metaheuristics.generators.TabuSearch.setInitialReference (
    State stateInitialRef)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.128.1.12 setWeight()

```
void metaheuristics.generators.TabuSearch.setWeight (
    float weight)
```

Reimplemented from [metaheuristics.generators.Generator](#).

5.128.1.13 updateReference()

```
void metaheuristics.generators.TabuSearch.updateReference (
    State stateCandidate,
    Integer countIterationsCurrent) throws IllegalArgumentException, SecurityException,
ClassNotFoundException, InstantiationException, IllegalAccessException, InvocationTargetException,
NoSuchMethodException
```

Reimplemented from [metaheuristics.generators.Generator](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/metaheuristics/generators/TabuSearch.java

5.129 metaheuristics.generators.TabuSearchTest Class Reference

Public Member Functions

- void **setUp** () throws Exception
- void **tearDown** () throws Exception
- void **testSetAndGetReference** ()
- void **testGetType** ()
- void **testUpdateReference** () throws Exception
- void **testUpdateReference_TabuLogic_Add** () throws Exception
- void **testUpdateReference_TabuLogic_Full** () throws Exception
- void **testGetReferenceList** ()
- void **testSetStateRef** ()
- void **testSetGeneratorType** ()
- void **testSetTypeCandidate** ()
- void **testGettersAndSetters** ()
- void **testUpdateReference_TabuLogic_Duplicate** () throws Exception
- void **testUpdateReference_StrategyNotTabu** () throws Exception
- void **testUpdateReference_NotAccepted** () throws Exception
- void **testUpdateReference_TabuLogic_Full_Duplicate** () throws Exception

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/test/java/metaheuristics/generators/TabuSearchTest.java

5.130 local_search.complement.TabuSolutions Class Reference

Public Member Functions

- List< State > **filterNeighbor** (List< State > listNeighborhood) throws Exception

Static Public Attributes

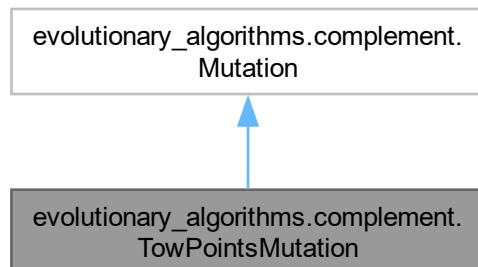
- static List< State > **listTabu** = new ArrayList<>()
- static int **maxelements** = 10

The documentation for this class was generated from the following file:

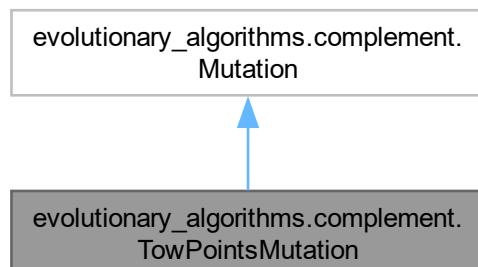
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/complement/TabuSolutions.java

5.131 evolutionary_algorithms.complement.TowPointsMutation Class Reference

Inheritance diagram for evolutionary_algorithms.complement.TowPointsMutation:



Collaboration diagram for evolutionary_algorithms.complement.TowPointsMutation:



Public Member Functions

- [State mutation \(State newind, double PM\)](#)

5.131.1 Member Function Documentation

5.131.1.1 mutation()

```
State evolutionary_algorithms.complement.TowPointsMutation.mutation (
    State newind,
    double PM)
```

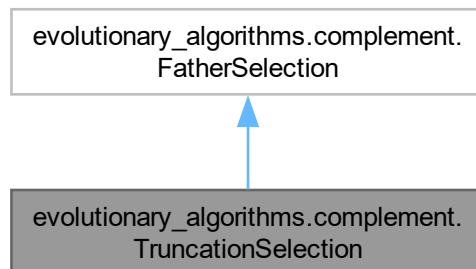
Reimplemented from [evolutionary_algorithms.complement.Mutation](#).

The documentation for this class was generated from the following file:

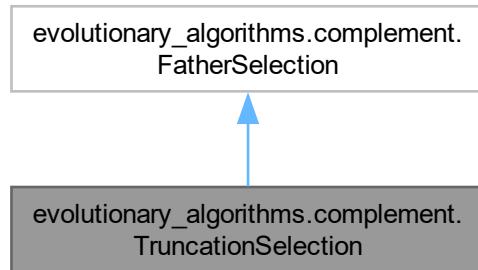
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/TowPointsMutation.java

5.132 evolutionary_algorithms.complement.TruncationSelection Class Reference

Inheritance diagram for evolutionary_algorithms.complement.TruncationSelection:



Collaboration diagram for evolutionary_algorithms.complement.TruncationSelection:



Public Member Functions

- List< `State` > **OrderBetter** (List< `State` > listState)
- List< `State` > **ascOrderBetter** (List< `State` > listState)
- List< `State` > **selection** (List< `State` > listState, int truncation)

5.132.1 Member Function Documentation

5.132.1.1 `selection()`

```
List< State > evolutionary_algorithms.complement.TruncationSelection.selection (
    List< State > listState,
    int truncation)
```

Reimplemented from [evolutionary_algorithms.complement.FatherSelection](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/TruncationSelection.java

5.133 config.tspDynamic.TSPState Class Reference

Public Member Functions

- int **getValue** ()
- void **setValue** (int value)
- int **getIdCity** ()
- void **setIdCity** (int idCity)

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/resources/config/tspDynamic/TSPState.java

5.134 problem.extension.TypeSolutionMethod Enum Reference

Public Attributes

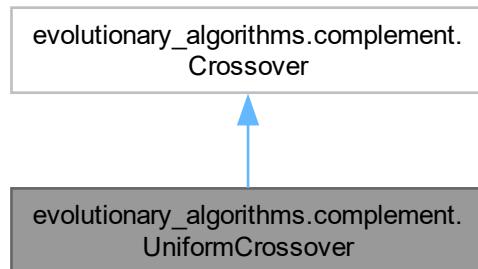
- FactoresPonderados
- MultiObjetivoPuro

The documentation for this enum was generated from the following file:

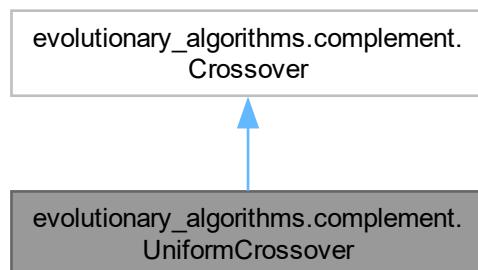
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/problem/extension/TypeSolutionMethod.java

5.135 evolutionary_algorithms.complement.UniformCrossover Class Reference

Inheritance diagram for evolutionary_algorithms.complement.UniformCrossover:



Collaboration diagram for evolutionary_algorithms.complement.UniformCrossover:



Public Member Functions

- `int[] mascara (int length)`
- `State crossover (State father1, State father2, double PC)`

5.135.1 Member Function Documentation

5.135.1.1 `crossover()`

```
State evolutionary_algorithms.complement.UniformCrossover.crossover (
    State father1,
    State father2,
    double PC)
```

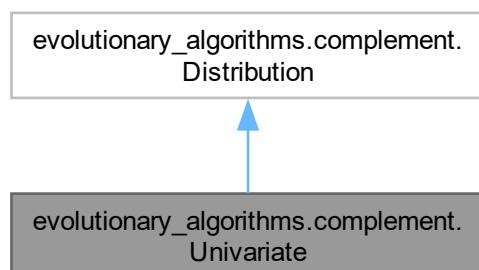
Reimplemented from [evolutionary_algorithms.complement.Crossover](#).

The documentation for this class was generated from the following file:

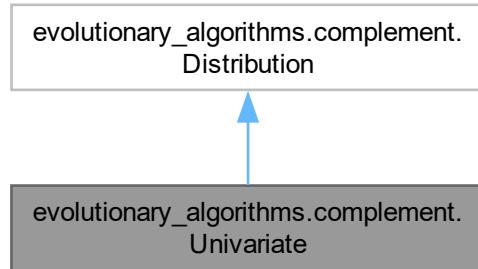
- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/UniformCrossover.java

5.136 [evolutionary_algorithms.complement.Univariate](#) Class Reference

Inheritance diagram for `evolutionary_algorithms.complement.Univariate`:



Collaboration diagram for evolutionary_algorithms.complement.Univariate:



Public Member Functions

- List< [Probability](#) > **distribution** (List< [State](#) > fathers)
- List< String > **getListKey** (SortedMap< String, Object > map)

5.136.1 Member Function Documentation

5.136.1.1 distribution()

```
List< Probability > evolutionary_algorithms.complement.Univariate.distribution (
    List< State > fathers)
```

Reimplemented from [evolutionary_algorithms.complement.Distribution](#).

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/evolutionary_algorithms/complement/Univariate.java

5.137 local_search.complement.UpdateParameter Class Reference

Static Public Member Functions

- static Integer **updateParameter** (Integer parameter)

The documentation for this class was generated from the following file:

- C:/IntelliJPro/uni/LB/BiCIAM/src/main/java/local_search/complement/UpdateParameter.java

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