

RAVEN regression tests' description

May 17, 2018

1 Introduction

This document has been automatically generated by the script “raven\developer_tools\createRegressionTestDocument.py” Currently there are 537 regression tests in the RAVEN framework. The % of tests that are commented is currently equal to 94.7858472998 %.

2 Documented Tests

Regression tests for the *Python* RAVEN framework are found in raven/tests/framework. There is a hierarchy of folders with tests collected by similar testing. Every test is described in a special XML node (< *TestInfo* >) within the < *Simulation* > block. An example is reported below:

```
<Simulation>
...
<TestInfo>
  <name>framework/path/to/test/label</name>
  <author>AuthorGitLabTag</author>
  <created>YYYY-MM-DD</created>
  <classesTested>Module.Class, Module.Class</classesTested>
  <description>
    Paragraph describing work-flows, modules, classes, entities, etc.,
    how they are tested, and any other notes
  </description>
  <requirements>RequirementsLabel</requirements>
  <analytic>paragraph description of analytic test</analytic>
  ...
</TestInfo>
...
</Simulation>
```

The < *requirements* > and < *analytic* > nodes are optional, for those tests who satisfy an NQA design requirement and or have an analytic solution documented in the analytic tests document. Other notes on block contents:

- < *name* >: this is the test framework path, as well as the name (label) assigned in the tests file block. This is the path and name that show up when running the tests using the testing harness (run_tests)
- < *author* >: this is the GitLab tag of the author who constructed this test originally, i.e. *alfoa* for @alfoa
- < *created* >: this is the date on which the test was originally created, in year-month-day YYYY-MM-DD XSD date format
- < *classesTested* >: a list of the classes tested in the python framework, listed as Entity.Class, i.e. *Samplers.MonteCarlo*

- *< description >*: general notes about what work-flows or other methods are tested
- *< requirements >* (optional): lists the NQA requirement that this test satisfies
- *< analytic >* (optional): describes the analytic nature of this test and how it is documented in the analytic tests documentation

An additional node is optionally available to demonstrate significant revisions to a test:

```

<Simulation>
...
<TestInfo>
...
  <revisions>
    <revision author='AuthorGitLabTag' date='YYYY-MM-DD' >paragraph
      description of revision</revision>
    <revision author='AuthorGitLabTag' date='YYYY-MM-DD' >paragraph
      description of revision</revision>
  </revisions>
...
</TestInfo>
...
</Simulation>

```

The following sub-sections collect all the documented tests.

2.1 Requirement tests' description

This section contains the description of all the requirement tests.

2.1.1 FRAMEWORK.SIMPLE FRAMEWORK

This test can be found at “./raven/tests/framework/test_simple.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.simple_framework
```

or

```
./run_framework_tests --re=framework.simple_framework
```

- Test Description:
 - This test is aimed to check the functionality of RAVEN to perform random sampling (MonteCarlo) generating random numbers that are going to be directly used in RELAP7 for seeding the internal random number generator.
- Original Author:
 - cogljj
- Creation date:
 - 2013-07-23
- The classes tested in this test are:
 - Samplers.MonteCarlo, Models.Code

- This test fulfills the following requirement:
 - R-IS-2
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 2. revision info:
 - author : alfoa
 - date : 2016-04-27
 - description: New subdirectories structure
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.1.2 FRAMEWORK 2STEPS SAME DB

This test can be found at “./raven/tests/framework/test_2steps_same_db.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/2steps_same_db
```

or

```
./run_framework_tests --re=framework/2steps_same_db
```

- Test Description:
 - This test is aimed to test the capability of the RAVEN database structure to use the same database (HDF5) for subsequential analyses in order to collect all the results in the same HDF5 container
- Original Author:
 - @alfoa
- Creation date:
 - 2015-05-01
- The classes tested in this test are:
 - Databases.HDF5
- This test fulfills the following requirement:
 - R-IS-3
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : @maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History

2.1.3 FRAMEWORK.TEST OUTPUT

This test can be found at “./raven/tests/framework/test_output.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.test_output
```

or

```
./run_framework_tests --re=framework.test_output
```

- Test Description:
 - This test is aimed to check the OutStreams system in RAVEN (BOTH TYPE: Plot (all available plot types) and Print(all the available combination of options))
- Original Author:
 - coglj
- Creation date:
 - 2013-09-24
- The classes tested in this test are:
 - OutStreams.Plot, OutStreams.Print
- This test fulfills the following requirement:
 - R-RA-3
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : crsr
 - date : 2014-04-03
 - description: new input stile for the rom and the dummy. SVN r26236
 2. revision info:
 - author : alfoa
 - date : 2014-04-10
 - description: Interactive mode for Steps + moved exec on the fly outside the modules in order to avoid unneeded slowing down. SVN r26340
 3. revision info:
 - author : senrs
 - date : 2015-03-17
 - description: Scatter plot corrected
 4. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
 5. revision info:
 - author : alfoa

- date : 2015-06-18
 - description: Changed Name of all DataObjects
6. revision info:
- author : maljdan
 - date : 2015-06-22
 - description: Adding the outstream manager to the XSD and adjusting some of the input files to play nicely with it.
7. revision info:
- author : senrs
 - date : 2015-07-08
 - description: Adding subPlot capability
8. revision info:
- author : coglj
 - date : 2015-10-08
 - description: Switching from RAVEN model to external model, so RELAP-7 not needed. This is checking raven's output, so it shouldn't depend on RELAP-7. This removes the raven c++ input files. This updates gold files because of changing the model.
9. revision info:
- author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
10. revision info:
- author : alfoa
 - date : 2016-09-01
 - description: Close #650
11. revision info:
- author : coglj
 - date : 2016-10-07
 - description: Having both a color and a colormap doesn't make sense.
12. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.1.4 FRAMEWORK.TEST ROM TRAINER

This test can be found at `./raven/tests/framework/test_rom_trainer.xml`. This test can be called executing the following command:

```
./run_tests --re=framework.test_rom_trainer
```

or

```
./run_framework_tests --re=framework.test_rom_trainer
```

- Test Description:

- This test is aimed to test the capability of RAVEN to train ROMs based on the data sets constructed by whatever sampling strategy
- Original Author:
 - alfoa
- Creation date:
 - 2013-09-26
- The classes tested in this test are:
 - Steps.RomTrainer, Models.ROM
- This test fulfills the following requirement:
 - R-RA-4
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2014-03-06
 - description: changed name of DataBase handling, modified all tests were using it, improved Step output handling etc r25347
 2. revision info:
 - author : alfoa
 - date : 2014-07-15
 - description: 2) eliminated redundancy type for distribution specification in samplers... all inputs and tests found in repository have been modified as well r28610
 3. revision info:
 - author : cogljj
 - date : 2014-10-06
 - description: Renaming blocks with IODataBase and OutStreamStep to IOStep. The two different steps were combined. r29902
 4. revision info:
 - author : alfoa
 - date : 2014-10-22
 - description: added variable sampling MC for RAVEN code interface + eliminated need to specify variable type for Functions and ExternalModels r30198
 5. revision info:
 - author : alfoa
 - date : 2015-05-19
 - description: Closes #171
 6. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 7. revision info:

- author : alfoa
 - date : 2015-09-12
 - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script
8. revision info:
- author : cogljj
 - date : 2015-10-12
 - description: Moving test_rom_trainer to test_rom_trainer_raven.
9. revision info:
- author : cogljj
 - date : 2015-10-12
 - description: Made a test rom trainer with an external model.
10. revision info:
- author : cogljj
 - date : 2015-11-17
 - description: Updating to work with scikit-learn 0.17. In the new version of sklearn the rom can not use a classifier anymore.
11. revision info:
- author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
12. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.1.5 FRAMEWORK.TESTGRID

This test can be found at “./raven/tests/framework/test_Grid_Sampler.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.testGrid
```

or

```
./run_framework_tests --re=framework.testGrid
```

- Test Description:
 - This test is aimed to check the capability in RAVEN to employ a Grid sampling strategy. Since the goal of the test is to testify that the Grid sampling strategy is functional, a Dummy model is used.
- Original Author:
 - crisr
- Creation date:
 - 2013-10-15

- The classes tested in this test are:
 - Sampler.Grid
- This test fulfills the following requirement:
 - R-RE-3
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
 2. revision info:
 - author : talbpaul
 - date : 2015-05-06
 - description: improved verbosity in tests and manual
 3. revision info:
 - author : alfoa
 - date : 2015-05-18
 - description: Closes #167
 4. revision info:
 - author : alfoa
 - date : 2015-05-18
 - description: Closes #169
 5. revision info:
 - author : alfoa
 - date : 2015-05-26
 - description: grid done
 6. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 7. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 8. revision info:
 - author : talbpaul
 - date : 2016-04-26
 - description: added check for pre-existing backup files when validating
 9. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.1.6 FRAMEWORK.TESTEXTERNALMODEL

This test can be found at “./raven/tests/framework/test_Lorentz.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.testExternalModel
```

or

```
./run_framework_tests --re=framework.testExternalModel
```

- Test Description:
 - This test is aimed to check the functionality of RAVEN to use ExternalModel entities.
- Original Author:
 - mandd
- Creation date:
 - 2013-10-24
- The classes tested in this test are:
 - Models.ExternalModel
- This test fulfills the following requirement:
 - R-IS-4
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
 2. revision info:
 - author : alfoa
 - date : 2015-04-21
 - description: Closes #122
 3. revision info:
 - author : cogljj
 - date : 2015-09-29
 - description: Modifing external modules to use relative to working directory.
 4. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.1.7 FRAMEWORK.TESTLIMITSURFACEPOSTPROCESSOR

This test can be found at “./raven/tests/framework/test_LimitSurface.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.testLimitSurfacePostProcessor
```

or

```
./run_framework_tests --re=framework.testLimitSurfacePostProcessor
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to generate Limit Surfaces from a pre-generated data set (in this case, generated with a MonteCarlo sampling), outputting the generated Limit Surface in DataObject.PointSet(s) reporting both transition boundaries (-1 1) or just one of them.
- Original Author:
 - alfoa
- Creation date:
 - 2014-07-10
- The classes tested in this test are:
 - Models.PostProcessors.LimitSurface, Functions.External
- This test fulfills the following requirement:
 - R-RA-1
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2014-07-11
 - description: Limit Surface pp fix. SVN r28533
 2. revision info:
 - author : alfoa
 - date : 2014-11-17
 - description: restructuring Steps (removed Adaptive and PostProcessor), adding Assembler capability, removed datatype input for Functions and External models, modified all the inputs, added SafestPoint postprocessor and relative regression test, fixed Sampling for discrete distributions, added check for the distributions consistency between framework and RELAP7. SVN r30411
 3. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 4. revision info:
 - author : talbpaul
 - date : 2015-07-06
 - description: standardization of tests

5. revision info:
 - author : talbpaul
 - date : 2015-07-06
 - description: Revert ”standardization of tests” This reverts commit 68099325e8daba0f756179a20b5c75ba651cb62d.
6. revision info:
 - author : talbpaul
 - date : 2015-07-06
 - description: updated tests, added script
7. revision info:
 - author : talbpaul
 - date : 2015-07-07
 - description: updated to restrict partial-node comments
8. revision info:
 - author : coglj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
9. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
10. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.1.8 FRAMEWORK.TEST BISON MC SIMPLE AND ALIAS SYSTEM

This test can be found at “./raven/tests/framework/test_bison_mc_simple.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.test_bison_mc_simple_and_alias_system
```

or

```
./run_framework_tests --re=framework.test_bison_mc_simple_and_alias_system
```

- Test Description:
 - This test is aimed to check the functionality of RAVEN to perform random sampling (MonteCarlo) on simple 1Dimensional distributions, when using a MooseBased application (in this case, BISON). In addition, it tests the usage of the alias system with such code.
- Original Author:
 - coglj
- Creation date:
 - 2013-12-03

- The classes tested in this test are:
 - Samplers.MonteCarlo, Models.Code.MooseBasedApp, Models.AliasSystem
- This test fulfills the following requirement:
 - R-IS-6
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 2. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.1.9 FRAMEWORK.TEST DISTRIBUTIONS

This test can be found at “./raven/framework/TestDistributions.py”. This test can be called executing the following command:

```
./run_tests --re=framework.test_distributions
```

or

```
./run_framework_tests --re=framework.test_distributions
```

- Test Description:
 - This test is a Unit Test for the Distributions classes. It tests all the distributions and all the methods.
- Original Author:
 - cogljj
- Creation date:
 - 2013-12-10
- The classes tested in this test are:
 -
- This test fulfills the following requirement:
 - R-RE-1
- Since the creation of this test, the following main revisions have been performed:

1. revision info:
 - author : coglj
 - date : 2013-12-10
 - description: Adding test of all the rest of the distributions except for binomial. r23360
2. revision info:
 - author : senrs
 - date : 2015-01-26
 - description: fixed Bug in Distribution.py the attribute mean is obsolete use untrMean instead
3. revision info:
 - author : senrs
 - date : 2015-01-26
 - description: Fixed bugs in the if statements, etc...and included tests for Distributions.py
4. revision info:
 - author : talbpaul
 - date : 2015-02-05
 - description: added pickle methods and tests for distributionsw
5. revision info:
 - author : alfoa
 - date : 2015-02-10
 - description: finished caching of data
6. revision info:
 - author : talbpaul
 - date : 2015-03-11
 - description: added way to do beta through keywords, still need to test stochcoll, but testdistros is passing
7. revision info:
 - author : coglj
 - date : 2015-04-29
 - description: Adding test of standard deviation.
8. revision info:
 - author : coglj
 - date : 2015-05-05
 - description: Adding check of std deviation of a binomial.
9. revision info:
 - author : coglj
 - date : 2015-05-06
 - description: Adding additional checks of the mean and standard deviation.
10. revision info:
 - author : alfoa
 - date : 2015-05-18
 - description: modified test distribution
11. revision info:

- author : mandd
 - date : 2015-06-16
 - description: fixed testDistributions
12. revision info:
- author : alfoa
 - date : 2016-03-31
 - description: Closes #478
13. revision info:
- author : maljdan
 - date : 2016-04-12
 - description: Improving readability of our own code and removing extraneous functions.
14. revision info:
- author : cogljj
 - date : 2016-04-12
 - description: Converting Distributions to use the new input system. All distributions have been converted.
15. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.1.10 FRAMEWORK.TEST IOSTEP LOAD

This test can be found at “./raven/tests/framework/test_iostep_load.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.test_iostep_load
```

or

```
./run_framework_tests --re=framework.test_iostep_load
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to perform IO operation on its own object. This case checks the capability to create DataObjects from a folder containing CSVs and to dump them into HDF5 (and viceversa)
- Original Author:
 - cogljj
- Creation date:
 - 2014-09-29
- The classes tested in this test are:
 - Steps.IOSep, DataObjects.PointSet, DataObjects.HistorySet, Databases.HDF5
- This test fulfills the following requirement:

– R-RA-2

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : coglj
- date : 2014-10-06
- description: Renaming blocks with IODataBase and OutStreamStep to IOStep. The two different steps were combined. SVN r29902

2. revision info:

- author : coglj
- date : 2014-10-08
- description: Modify input to use its own unique database. SVN r29924

3. revision info:

- author : coglj
- date : 2015-02-27
- description: Adding documentation to the manual about relative working directory. Also changing one of tests to do this.

4. revision info:

- author : alfoa
- date : 2015-03-04
- description: Modified batch sizes because sometimes, if we run the tests in parallel, the order of values in csv can be different

5. revision info:

- author : mandd
- date : 2015-04-17
- description: conversion to Database and DataObjects

6. revision info:

- author : coglj
- date : 2015-04-23
- description: Switching to relative directories for working directory and database directory. Switching to default to relative to the xml file, not relative to the run dir. Passing the run info to the DataBases so that the working directory is known.

7. revision info:

- author : maljdan
- date : 2015-06-16
- description: Fixing the input files to pass the validation

8. revision info:

- author : alfoa
- date : 2015-06-18
- description: Changed Name of all DataObjects

9. revision info:

- author : talbpaul
- date : 2015-07-07

- description: updated to restrict partial-node comments
- 10. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
- 11. revision info:
 - author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
- 12. revision info:
 - author : maljdan
 - date : 2016-06-27
 - description: Adjusting the inputs and outputs of two test cases to match what the loaded files read.
- 13. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.1.11 FRAMEWORK.ND EXTERNAL MC

This test can be found at “./raven/tests/framework/test_simple_ND_external_MC.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.ND_external_MC
```

or

```
./run_framework_tests --re=framework.ND_external_MC
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to handle ND (custom) probability density functions (distributions), when a MonteCarlo sampling strategy is performed.
- Original Author:
 - mandd
- Creation date:
 - 2015-03-04
- The classes tested in this test are:
 - Distributions.NDInverseWeight, Distributions.NDCartesianSpline, Samplers.MonteCarlo
- This test fulfills the following requirement:
 - R-RE-2
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:

- author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
2. revision info:
- author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
3. revision info:
- author : coglj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
4. revision info:
- author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
5. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.1.12 FRAMEWORK CALCULATE AND TRANSFER

This test can be found at “./raven/tests/framework/test_calc_and_transfer.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/calculate_and_transfer
```

or

```
./run_framework_tests --re=framework/calculate_and_transfer
```

- Test Description:
 - Creates data with an external model, then creates a rom from that, and then compares the data generated by both with the ComparisonStatistics class.
- Original Author:
 - coglj
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - ComparisonStatistics,IOStep
- This test fulfills the following requirement:
 - R-IS-5

2.1.13 FRAMEWORK CODEINTERFACETESTS.TESTLHSBISONPARALLEL

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_LHS_Sampler_Bison_parallel.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testLHSBisonParallel
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testLHSBisonParallel
```

- Test Description:
 - An example of using the MooseBasedApp code interface. This test is designed to ensure the MooseBasedApp interface runs correctly, when used with a Stratified sampling approach.
- Original Author:
 - senrs
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - Models.Code.MooseBasedApp, Samplers.Grid
- This test fulfills the following requirement:
 - R-IS-1
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2015-10-15
 - description: merged devel and resolved conflicts
 2. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 3. revision info:
 - author : talbpaul
 - date : 2016-04-26
 - description: added check for pre-existing backup files when validating
 4. revision info:
 - author : alfoa
 - date : 2016-10-20
 - description: modified XSD and removed dim attribute from all the tests
 5. revision info:
 - author : talbpaul
 - date : 2016-10-25

- description: removed dim for validation purposes
- 6. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.1.14 FRAMEWORK OPTIMIZERS.BEALE

This test can be found at “./raven/tests/framework/Optimizers/beale.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Beale
```

or

```
./run_framework_tests --re=framework/Optimizers.Beale
```

- Test Description:
 - This test runs the optimization on Beale’s function. It tests analytic optimization values as well as the mechanical operation of the test. Also tests the ”gainGrowthFactor” and ”gainShrinkFactor” convergence parameters.
- This test is analytic:
 - This test uses Beale’s function, which is documented in the analytic tests documentation under the Optimizer functions section.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-05-03
- The classes tested in this test are:
 - Optimizer
- This test fulfills the following requirement:
 - R-RM-1

2.1.15 FRAMEWORK POSTPROCESSORS BASICSTATISTICS GENERAL

This test can be found at “./raven/tests/framework/PostProcessors/BasicStatistics/test_BasicStatistics.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/general
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/general
```

- Test Description:
 - This requirements test checks operation of the basic statistics postprocessor.

- Original Author:
 - alfoa
- Creation date:
 - 2014-05-21
- The classes tested in this test are:
 - PostProcessors.BasicStatistics
- This test fulfills the following requirement:
 - R-RA-5

2.1.16 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION EXACTPCA

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction/test_dataMiningExactPCA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensionality
```

- Test Description:
 - Tests decomposition with PCA model.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining
- This test fulfills the following requirement:
 - R-RA-6

2.2 Analytical tests’ description

This section contains the description of all the analytical tests.

2.2.1 FRAMEWORK OPTIMIZERS.BEALE

This test can be found at “./raven/tests/framework/Optimizers/beale.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Beale
```

or

```
./run_framework_tests --re=framework/Optimizers.Beale
```

- Test Description:
 - This test runs the optimization on Beale’s function. It tests analytic optimization values as well as the mechanical operation of the test. Also tests the ”gainGrowthFactor” and ”gainShrinkFactor” convergence parameters.
- This test is analytic:
 - This test uses Beale’s function, which is documented in the analytic tests documentation under the Optimizer functions section.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-05-03
- The classes tested in this test are:
 - Optimizer
- This test fulfills the following requirement:
 - R-RM-1

2.2.2 FRAMEWORK OPTIMIZERS.GOLDSTEINPRICE

This test can be found at “./raven/tests/framework/Optimizers/goldsteinprice.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.GoldsteinPrice
```

or

```
./run_framework_tests --re=framework/Optimizers.GoldsteinPrice
```

- Test Description:
 - This test runs the optimization on the Goldstein-Price function. It tests analytic optimization values as well as the mechanical operation of the test. Also covers the Bernoulli stochastic distribution, and convergence nodes iterationLimit, absoluteThreshold, and minStepSize.
- This test is analytic:
 - This test uses the Goldstein-Price function, which is documented in the analytic tests documentation under the Optimizer functions section.

- Original Author:
 - talbpaul
- Creation date:
 - 2017-05-30
- The classes tested in this test are:
 - Optimizer

2.2.3 FRAMEWORK OPTIMIZERS.MCCORMICK

This test can be found at “./raven/tests/framework/Optimizers/mccormick.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.McCormick
```

or

```
./run_framework_tests --re=framework/Optimizers.McCormick
```

- Test Description:
 - This test runs the optimization on the McCormick function. It tests analytic optimization values as well as the mechanical operation of the test.
- This test is analytic:
 - This test uses the McCormick function, which is documented in the analytic tests documentation under the Optimizer functions section.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-05-30
- The classes tested in this test are:
 - Optimizer

2.2.4 FRAMEWORK OPTIMIZERS.MAX

This test can be found at “./raven/tests/framework/Optimizers/max.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Max
```

or

```
./run_framework_tests --re=framework/Optimizers.Max
```

- Test Description:
 - This test runs the optimization on $(-1) \times (\text{Beale's function})$. It tests analytic optimization values as well as the mechanical operation of the test, for maximization operations.

- This test is analytic:
 - This test uses an upside-down Beale’s function, which is documented in the analytic tests documentation under the Optimizer functions section.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-06-13
- The classes tested in this test are:
 - Optimizer

2.2.5 FRAMEWORK OPTIMIZERS.STOCHASTIC

This test can be found at “./raven/tests/framework/Optimizers/stochastic.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Stochastic
```

or

```
./run_framework_tests --re=framework/Optimizers.Stochastic
```

- Test Description:
 - This test runs the optimization on a inverse parabola with signal-to-noise ratio close to 1.0 using multiple gradient evaluations to denoise the response space. It tests stochastic optimization mechanics. Also tests having other response variables in SolutionExport besides the objective variable.
- This test is analytic:
 - This tests uses the inverse parabola as a basis for the noisy optimization. The inverse parabola is documented in the analytic tests, and has an average optimal max point at $x = 0$.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-06-14
- The classes tested in this test are:
 - Optimizer.SPSA
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2017-05-14
 - description: creation
 2. revision info:

- author : talbpaul
- date : 2017-07-11
- description: changed model for simpler analytic checking

3. revision info:

- author : talbpaul
- date : 2017-07-18
- description: added additional model output for testing mechanics

2.2.6 FRAMEWORK OPTIMIZERS.BOUNDARY

This test can be found at “./raven/tests/framework/Optimizers/boundary.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Boundary
```

or

```
./run_framework_tests --re=framework/Optimizers.Boundary
```

- Test Description:

- This test runs optimization where the preferred solution is past the limits of the input variable. The model is an upside-down parabola $y = -x^2$ with the input constrained to [1,2]. This test checks operation of solutions on a boundary.

- This test is analytic:

- This test uses an inverse parabola, whose minimum is outside the domain and expected solution is at the lowest possible input value (1.0).

- Original Author:

- talbpaul

- Creation date:

- 2017-06-15

- The classes tested in this test are:

- Optimizer

2.2.7 FRAMEWORK OPTIMIZERS.PRECONDITION

This test can be found at “./raven/tests/framework/Optimizers/precondition.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Precondition
```

or

```
./run_framework_tests --re=framework/Optimizers.Precondition
```

- Test Description:

- This test runs the optimization on an analytic test function (Maljovech). It is specifically designed to be approximated by a preconditioner.

- This test is analytic:
 - This test uses the analytic function labeled Maljovec, which is documented in the analytic tests documentation under the Optimizer functions section.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-06-20
- The classes tested in this test are:
 - Optimizer
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2017-08-08
 - description: added preconditioning to initialization, also now tests constants available to preconditioner

2.2.8 FRAMEWORK OPTIMIZERS.CONSTRAINED

This test can be found at “./raven/tests/framework/Optimizers/constrained.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Constrained
```

or

```
./run_framework_tests --re=framework/Optimizers.Constrained
```

- Test Description:
 - This test runs constrained optimization on Mishra’s Bird function. The trajectories and seed chosen demonstrate convergence on a plateau (trajectory 0), good convergence (trajectory 1), and attempt to converge outside the constraints (trajectory 2).
- This test is analytic:
 - This test uses Mishra’s Bird function, which is documented in the analytic tests documentation under the Optimizer functions section.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-06-26
- The classes tested in this test are:
 - Optimizer

2.2.9 FRAMEWORK OPTIMIZERS.PERSISTENCE

This test can be found at “./raven/tests/framework/Optimizers/persistence.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Persistence
```

or

```
./run_framework_tests --re=framework/Optimizers.Persistence
```

- Test Description:
 - This test runs the optimization on a inverse parabola with a persistence greater than 1 to demonstrate mechanics.
- This test is analytic:
 - This tests uses the inverse parabola for optimization. The inverse parabola is documented in the analytic tests, and has an optimal max point at $x = 0$.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-09-06
- The classes tested in this test are:
 - Optimizer.SPSA

2.2.10 FRAMEWORK OPTIMIZERS.BEALEWITHSAMPLER

This test can be found at “./raven/tests/framework/Optimizers/beale_with_sampler.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.BealeWithSampler
```

or

```
./run_framework_tests --re=framework/Optimizers.BealeWithSampler
```

- Test Description:
 - This test runs the optimization on Beale’s function. It tests analytic optimization values as well as the mechanical operation of the test. It tests the possibility to initialize the starting points (For each trajectory) with a Forward Sampler (e.g. Montecarlo, Grid, etc.)
- This test is analytic:
 - This test uses beale function, which is documented in the analytic tests documentation under the Optimizer functions section.
- Original Author:
 - alfoa
- Creation date:
 - 2017-08-29
- The classes tested in this test are:
 - Optimizer

2.2.11 FRAMEWORK OPTIMIZERS.TRAJGRID

This test can be found at “./raven/tests/framework/Optimizers/traj_grid.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.TrajGrid
```

or

```
./run_framework_tests --re=framework/Optimizers.TrajGrid
```

- Test Description:
 - This tests using the Grid sampler as a seeding chooser for the GradientBasedOptimizer class.
- This test is analytic:
 - This test uses an inverted 2-dimensional parabola with maximum at (0,0) of 1.0.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-09-07
- The classes tested in this test are:
 - Optimizer.SPSA, Samplers.Grid

2.2.12 FRAMEWORK OPTIMIZERS.BEALEFINITEDIFFERENCE

This test can be found at “./raven/tests/framework/Optimizers/beale_finite_difference.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.BealeFiniteDifference
```

or

```
./run_framework_tests --re=framework/Optimizers.BealeFiniteDifference
```

- Test Description:
 - This test runs the optimization (Finite difference forward) on Beale’s function. It tests analytic optimization values as well as the mechanical operation of the Finite Difference optimizer.
- This test is analytic:
 - This test uses Beale’s function, which is documented in the analytic tests documentation under the Optimizer functions section.
- Original Author:
 - alfoa
- Creation date:
 - 2017-09-11
- The classes tested in this test are:
 - Optimizer.FiniteDifferenceGradientOptimizer

2.2.13 FRAMEWORK OPTIMIZERS.STOCHASTICFINITEDIFFERENCE

This test can be found at “./raven/tests/framework/Optimizers/stochastic_finite_difference.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.StochasticFiniteDifference
```

or

```
./run_framework_tests --re=framework/Optimizers.StochasticFiniteDifference
```

- Test Description:
 - This test runs the optimization (Finite difference forward) on a inverse parabola with signal-to-noise ratio close to 1.0 using multiple gradient evaluations to denoise the response space. It tests stochastic optimization mechanics.
- This test is analytic:
 - This tests uses the inverse parabola as a basis for the noisy optimization. The inverse parabola is documented in the analytic tests, and has an average optimal max point at $x = 0$.
- Original Author:
 - alfoa
- Creation date:
 - 2017-09-11
- The classes tested in this test are:
 - Optimizer.FiniteDifferenceGradientOptimizer

2.2.14 FRAMEWORK PCA ADAPTIVE SGC TEST ADAPTIVE SGC ATTENUATION

This test can be found at “./raven/tests/framework/pca_adaptive_sgc/test_adaptive_sgc_attenuation.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_attenuation
```

or

```
./run_framework_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_attenuation
```

- Test Description:
 - Tests use of the PCA method for adaptive sparse grids on exponential decay models with uncorrelated inputs.
- This test is analytic:
 - Attenuation with Multivariate Normal Distribution
- Original Author:
 - wangc
- Creation date:
 - 2015-11-18
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers.AdaptiveSparseGrid, SupervisedLearning.GaussPolynomialROM

2.2.15 FRAMEWORK PCA ADAPTIVE SGC TEST ADAPTIVE SGC POLY ANALYTIC

This test can be found at “./raven/tests/framework/pca_adaptive_sgc/test_adaptive_sgc_poly_correlation.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_poly_analytic
```

or

```
./run_framework_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_poly_analytic
```

- Test Description:
 - Tests use of the PCA method for adaptive sparse grids on polynomial models.
- This test is analytic:
 - ”Tensor Polynomial (First-Order) with Multivariate Normal Distribution”
- Original Author:
 - wangc
- Creation date:
 - 2015-11-20
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers.AdaptiveSparseGrid, SupervisedLearning.GaussPolynomialROM

2.2.16 FRAMEWORK PCA ADAPTIVE SGC

This test can be found at “./raven/tests/framework/pca_adaptive_sgc/test_adaptive_sgc_poly_pca_analytic.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_adaptive_sgc
```

or

```
./run_framework_tests --re=framework/pca_adaptive_sgc
```

- Test Description:
 - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using uncorrelated multivariate normal distributions.
- This test is analytic:
 - This test is analytic in mean and variance using the ”tensor polynomial” analytic model documented in the analytic tests.
- Original Author:
 - wangc
- Creation date:
 - 2015-12-01
- The classes tested in this test are:
 - Samplers.AdaptiveSparseGrid, SupervisedLearning.GaussPolynomialROM

2.2.17 FRAMEWORK PCA SOBOL TEST ADAPTIVE SOBOL POLY

This test can be found at “./raven/tests/framework/pca_sobol/test_adapt_sobol_poly.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework/pca_sobol/test_adaptive_sobol_poly
```

or

```
./run_framework_tests --re=framework/pca_sobol/test_adaptive_sobol_poly
```

- Test Description:
 - Tests the Adaptive Sobol sampler combined with input reductions via PCA method, using uncorrelated multivariate normal distributions.
- This test is analytic:
 - This test is analytic in mean and variance using the “tensor polynomial” analytic model documented in the analytic tests.
- Original Author:
 - wangc
- Creation date:
 - 2016-01-06
- The classes tested in this test are:
 - Samplers.AdaptiveSobol,SupervisedLearning.HDMRRom

2.2.18 FRAMEWORK PCA SOBOL TEST ADAPTIVE SOBOL ATTENUATION

This test can be found at “./raven/tests/framework/pca_sobol/test_adapt_sobol_attenu.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework/pca_sobol/test_adaptive_sobol_attenuation
```

or

```
./run_framework_tests --re=framework/pca_sobol/test_adaptive_sobol_attenuation
```

- Test Description:
 - Tests the Adaptive Sobol sampler combined with input reductions via PCA method, using uncorrelated multivariate normal distribution.
- This test is analytic:
 - This test is analytic in mean and variance using the “attenuation” analytic model documented in the analytic tests.
- Original Author:
 - wangc
- Creation date:
 - 2016-01-06
- The classes tested in this test are:
 - Samplers.AdaptiveSobol,SupervisedLearning.HDMRRom

2.2.19 FRAMEWORK PCA SOBEL TEST ADAPTIVE SOBEL ATTENU CORRELATION

This test can be found at “./raven/tests/framework/pca_sobel/test_adapt_sobel_correlation.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_sobel/test_adaptive_sobel_attenu_correlation
```

or

```
./run_framework_tests --re=framework/pca_sobel/test_adaptive_sobel_attenu_correlation
```

- Test Description:
 - Tests the Adaptive Sobol sampler combined with input reductions via PCA method, using correlated multivariate normal distributions.
- This test is analytic:
 - This test is analytic in mean and variance using the “attenuation” and “tensor polynomial” analytic models documented in the analytic tests.
- Original Author:
 - wangc
- Creation date:
 - 2016-02-17
- The classes tested in this test are:
 - Samplers.AdaptiveSobel,SupervisedLearning.HDMRRom

2.2.20 FRAMEWORK PCA SOBEL TEST SOBEL POLY CORRELATION

This test can be found at “./raven/tests/framework/pca_sobel/test_sobel_correlation.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_sobel/test_sobel_poly_correlation
```

or

```
./run_framework_tests --re=framework/pca_sobel/test_sobel_poly_correlation
```

- Test Description:
 - Tests the Sobol sampler combined with input reductions via PCA method, using correlated multivariate normal distributions.
- This test is analytic:
 - This test is analytic in mean and variance using the “attenuation” and “tensor polynomial” analytic models documented in the analytic tests.
- Original Author:
 - wangc
- Creation date:
 - 2016-01-06
- The classes tested in this test are:
 - Samplers.Sobel,SupervisedLearning.HDMRRom

2.2.21 FRAMEWORK PCA SPARSEGRID ATTENUCORRELATION

This test can be found at “./raven/tests/framework/pca_sparseGridCollocation/test_attenu_correlation.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/attenuCorrelation
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/attenuCorrelation
```

- Test Description:
 - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using correlated multivariate normal distributions.
- This test is analytic:
 - This test is analytic in mean and variance using the “attenuation” analytic model documented in the analytic tests.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-23
- The classes tested in this test are:
 - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.2.22 FRAMEWORK PCA SPARSEGRID ATTENUCORRELATIONMC

This test can be found at “./raven/tests/framework/pca_sparseGridCollocation/test_attenu_correlation_mc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/attenuCorrelationMC
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/attenuCorrelationMC
```

- Test Description:
 - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using correlated multivariate normal distributions.
- This test is analytic:
 - This test is analytic in mean and variance using the “attenuation” analytic model documented in the analytic tests.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-23
- The classes tested in this test are:
 - Samplers.MonteCarlo

2.2.23 FRAMEWORK PCA SPARSEGRID POLYCORRELATION

This test can be found at “./raven/tests/framework/pca_sparseGridCollocation/test_poly_correlation.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/polyCorrelation
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/polyCorrelation
```

- Test Description:
 - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using correlated multivariate normal distributions.
- This test is analytic:
 - This test is analytic in mean and variance using the “tensor polynomial” analytic model documented in the analytic tests.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-23
- The classes tested in this test are:
 - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.2.24 FRAMEWORK PCA SPARSEGRID POLYCORRELATIONMC

This test can be found at “./raven/tests/framework/pca_sparseGridCollocation/test_poly_correlation_mc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/polyCorrelationMC
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/polyCorrelationMC
```

- Test Description:
 - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using correlated multivariate normal distributions.
- This test is analytic:
 - This test is analytic in mean and variance using the “tensor polynomial” analytic model documented in the analytic tests.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-23
- The classes tested in this test are:
 - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.2.25 FRAMEWORK PCA SPARSEGRID POLYANALYTICALTEST

This test can be found at “./raven/tests/framework/pca_sparseGridCollocation/test_poly.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/polyAnalyticalTest
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/polyAnalyticalTest
```

- Test Description:
 - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using uncorrelated multivariate normal distributions.
- This test is analytic:
 - This test is analytic in mean and variance using the “tensor polynomial” analytic model documented in the analytic tests.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-23
- The classes tested in this test are:
 - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.2.26 FRAMEWORK SAMPLERS ROM VERIFYGAUSSPOLYROM

This test can be found at “./raven/tests/framework/ROM/verify_time_scgpc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/verifyGaussPolyRom
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/verifyGaussPolyRom
```

- Test Description:
 - This test validates the time-dependent GaussPolynomialROM by sampling it and comparing to the original model.
- This test is analytic:
 - This test uses the “projectile.py” ballistic model and tracks position in time. The evaluations of this model as well as the ROMs should match the results documented there.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-03-09
- The classes tested in this test are:
 - SupervisedLearning.GaussPolynomialROM

2.2.27 FRAMEWORK SAMPLERS ROM SOBOL SOBOLSUDRETANALYTIC

This test can be found at “./raven/tests/framework/ROM/Sobol/test_sobol_sudret.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/sobolSudretAnalytic
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/sobolSudretAnalytic
```

- Test Description:
 - This analytic test checks the performance of HDMRRom against the simple Sudret polynomial.
- This test is analytic:
 - dumprom.xml has analytic mean and variance, and is documented in the analytic test documentation under “Global Sobol Sensitivity: Sudret”
- Original Author:
 - talbpaul
- Creation date:
 - 2016-03-09
- The classes tested in this test are:
 - SupervisedLearning.HDMRRom

2.2.28 FRAMEWORK SAMPLERS ROM SOBOL SOBOLISHIGAMIANALYTIC

This test can be found at “./raven/tests/framework/ROM/Sobol/test_sobol_ishigami.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/sobolIshigamiAnalytic
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/sobolIshigamiAnalytic
```

- Test Description:
 - This analytic test checks the performance of HDMRRom against the sinusoidal Ishigami function.
- This test is analytic:
 - dumprom.xml has analytic mean and variance, and is documented in the analytic test document under “Global Sobol Sensitivity: Ishigami”.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-03-08
- The classes tested in this test are:
 - SupervisedLearning.HDMRRom

2.2.29 FRAMEWORK SAMPLERS ROM SOBOL SOBOLGFUNCTION

This test can be found at “./raven/tests/framework/ROM/Sobol/test_sobol_gfunc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/sobolGFunction
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/sobolGFunction
```

- Test Description:
 - This analytic test checks the performance of HDMRRom against the discontinuous Sobol G-Function.
- This test is analytic:
 - dumprom.xml has analytic mean and variance, but is poorly converged for this model. It is documented in the analytic test documentation under ”Sobol G-Function”
- Original Author:
 - talbpaul
- Creation date:
 - 2016-03-08
- The classes tested in this test are:
 - SupervisedLearning.HDMRRom

2.2.30 FRAMEWORK SAMPLERS ROM SOBOL ANOVAONCUTHDMR

This test can be found at “./raven/tests/framework/ROM/Sobol/test_anova_cut.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/AnovaOnCutHDMR
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/AnovaOnCutHDMR
```

- Test Description:
 - This analytically tests calculating variance using ANOVA on cut-HDMR.
- This test is analytic:
 - This test is analytic in the variance, Sobol sensitivities, and mean of the response. These parameters are documented in the analytic tests documentation under ”Second-Order ANOVA of Second-Order Cut-HDMR Expansion of Sudret”.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-03-11
- The classes tested in this test are:
 - SupervisedLearning.HDMRRom

2.2.31 FRAMEWORK SAMPLERS ROM SOBOLEADAPTIVESOBOLE

This test can be found at “./raven/tests/framework/ROM/Sobole/test_adapt_sobole.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobole/AdaptiveSobole
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobole/AdaptiveSobole
```

- Test Description:
 - This tests using the AdaptiveSobole sampler to construct HDMRRom ROMs.
- This test is analytic:
 - dumprom.xml has analytic results for mean and variance in that are documented in the Attenuation section of the analytic tests manual.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-02-08
- The classes tested in this test are:
 - Samplers.AdaptiveSobole,SupervisedLearning.HDMRRom

2.2.32 FRAMEWORK SAMPLERS ROM SOBOLEVERIFYHDMRROM

This test can be found at “./raven/tests/framework/ROM/Sobole/verify_time_dep_sobole.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobole/verifyHDMRRom
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobole/verifyHDMRRom
```

- Test Description:
 - This analytic test checks that the time-dependent HDMRRom performs the same as the model it’s representing.
- This test is analytic:
 - This test uses ”projectile.py” as documented in the analytic tests document, and makes several evaluations of position based on time.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-11-08
- The classes tested in this test are:
 - SupervisedLearning.HDMRRom

2.2.33 FRAMEWORK SAMPLERS ROM SOBOL SPARSEGRID SCGPCSUDRETANALYTIC

This test can be found at “./raven/tests/framework/ROM/SparseGrid/test_scgpc_sudret.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/SparseGrid/scgpcSudretAnalytic
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/SparseGrid/scgpcSudretAnalytic
```

- Test Description:
 - This analytic test checks the performance of HDMRRom against the simple Sudret polynomial
- This test is analytic:
 - dumprom.xml has analytic mean and variance, documented in the analytic tests documentation under “Global Sobol Sensitivity: Sudret”.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-03-18
- The classes tested in this test are:
 - SupervisedLearning.GaussPolynomialROM

2.3 Verification tests’ description

This section contains the description of all the verification tests.

2.3.1 CLUSTER TESTS TEST MPI

This test can be found at “./raven/tests/cluster_tests/test_mpi.xml”. This test can be called executing the following command:

```
./run_tests --re=cluster_tests/test_mpi
```

or

```
./run_framework_tests --re=cluster_tests/test_mpi
```

- Test Description:
 - This is used for testing that mpi can be used directly, without a qsub. This could be used in pbs interactive mode.
- Original Author:
 - cogljj
- Creation date:
 - 2013-09-10
- The classes tested in this test are:
 - MPISimulationMode

2.3.2 CLUSTER TESTS TEST PBSDSH

This test can be found at “./raven/tests/cluster_tests/test_pbs.xml”. This test can be called executing the following command:

```
./run_tests --re=cluster_tests/test_pbsdsh
```

or

```
./run_framework_tests --re=cluster_tests/test_pbsdsh
```

- Test Description:
 - Tests using a custom mode with the pbsdsh command.
- Original Author:
 - coglj
- Creation date:
 - 2013-08-08
- The classes tested in this test are:
 - SimulationMode

2.3.3 CLUSTER TESTS TEST MPIQSUB

This test can be found at “./raven/tests/cluster_tests/test_mpiqsub_local.xml”. This test can be called executing the following command:

```
./run_tests --re=cluster_tests/test_mpiqsub
```

or

```
./run_framework_tests --re=cluster_tests/test_mpiqsub
```

- Test Description:
 - This tests running with mpi and a qsub.
- Original Author:
 - coglj
- Creation date:
 - 2015-02-26
- The classes tested in this test are:
 - MPISimulationMode

2.3.4 CLUSTER TESTS TEST MPIQSUB PARAMETERS

This test can be found at “./raven/tests/cluster_tests/test_mpiqsub_flex.xml”. This test can be called executing the following command:

```
./run_tests --re=cluster_tests/test_mpiqsub_parameters
```

or

```
./run_framework_tests --re=cluster_tests/test_mpiqsub_parameters
```

- Test Description:
 - Tests using the MPIExec and NodeParameter by fiddling with them and putting the node parameter in the MPIExec block.
- Original Author:
 - coglj
- Creation date:
 - 2016-08-31
- The classes tested in this test are:
 - MPISimulationMode,Simulation

2.3.5 CLUSTER TESTS TEST MPIQSUB LIMITNODE

This test can be found at “./raven/tests/cluster_tests/test_mpiqsub_limitnode.xml”. This test can be called executing the following command:

```
./run_tests --re=cluster_tests/test_mpiqsub_limitnode
```

or

```
./run_framework_tests --re=cluster_tests/test_mpiqsub_limitnode
```

- Test Description:
 - Tests using the limit node with a max on node.
- Original Author:
 - coglj
- Creation date:
 - 2016-05-26
- The classes tested in this test are:
 - MPISimulationMode

2.3.6 CLUSTER TESTS TEST MPIQSUB NOSPLIT

This test can be found at “./raven/tests/cluster_tests/test_mpiqsub_nosplit.xml”. This test can be called executing the following command:

```
./run_tests --re=cluster_tests/test_mpiqsub_nosplit
```

or

```
./run_framework_tests --re=cluster_tests/test_mpiqsub_nosplit
```

- Test Description:
 - This tests the no split node with a maximum on the node.
- Original Author:
 - coglj
- Creation date:
 - 2016-04-22
- The classes tested in this test are:
 - MPISimulationMode

2.3.7 FRAMEWORK PCARESPONSESURFACE

This test can be found at “./raven/tests/framework/test_pca_responseSurface.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pcaResponseSurface
```

or

```
./run_framework_tests --re=framework/pcaResponseSurface
```

- Test Description:
 - Tests responseSurface sampler in connection with PCA.
- Original Author:
 - wangc
- Creation date:
 - 2015-12-16
- The classes tested in this test are:
 - Samplers.responseSurface

2.3.8 FRAMEWORK.EXTERNAL XML

This test can be found at “./raven/tests/framework/test_External_XML.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.external_xml
```

or

```
./run_framework_tests --re=framework.external_xml
```

- Test Description:
 - This test is aimed to check the capability in RAVEN to load external XML files as part of the input file. Indeed, allows the user to inject in the input files XML blocks defined in external files
- Original Author:
 - wangc
- Creation date:
 - 2015-07-22
- The classes tested in this test are:
 - Simulation.ExternalXML
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 2. revision info:
 - author : talbpaul
 - date : 2016-04-26
 - description: added check for pre-existing backup files when validating
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.9 FRAMEWORK.TEST PUSH INTO HDF5

This test can be found at “./raven/tests/framework/test_push_into_hdf5.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.test_push_into_hdf5
```

or

```
./run_framework_tests --re=framework.test_push_into_hdf5
```

- Test Description:

- The idea of this input case is to test the capability of RAVEN create a Database HDF5 from DataObjects.PointSet and DataObjects.HistorySet and to construct from a Database the DataObjects.
- Original Author:
 - alfoa
- Creation date:
 - 2013-11-11
- The classes tested in this test are:
 - DataObjects.PointSet, DataObjects.HistorySet, Databases.HDF5
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2015-05-19
 - description: Closes #171
 2. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 3. revision info:
 - author : alfoa
 - date : 2015-06-21
 - description: modified Names + added new capabilities and flexibility in DataObjects + added options block. Modified XSD schema and manual to reflect the modifications
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : talbpaul
 - date : 2016-04-26
 - description: added check for pre-existing backup files when validating
 6. revision info:
 - author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
 7. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.10 FRAMEWORK.TEST MERGE 2 DATABASES

This test can be found at “./raven/tests/framework/test_merge_2_databases.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.test_merge_2_databases
```

or

```
./run_framework_tests --re=framework.test_merge_2_databases
```

- Test Description:
 - This test is aimed to check the possibility in RAVEN to merge 2 different Databases of type HDF5.
- Original Author:
 - alfoa
- Creation date:
 - 2015-03-03
- The classes tested in this test are:
 - Databases.HDF5
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 2. revision info:
 - author : talbpaul
 - date : 2016-04-26
 - description: some tests slipped through
 3. revision info:
 - author : alfoa
 - date : 2016-04-27
 - description: New subdirectories structure
 4. revision info:
 - author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
 5. revision info:
 - author : maljdan
 - date : 2016-05-23
 - description: Changing and regolding a test case that uses an external model when unnecessary.
 6. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.11 FRAMEWORK.TEST ROM TRAINER RAVEN

This test can be found at “./raven/tests/framework/test_rom_trainer_raven.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.test_rom_trainer_raven
```

or

```
./run_framework_tests --re=framework.test_rom_trainer_raven
```

- Test Description:
 - This test is aimed to check the functionality of the Step RomTrainer, for training ROM (external library imported and internal ones)
- Original Author:
 - cogljj
- Creation date:
 - 2015-10-12
- The classes tested in this test are:
 - Models.ROM.SKLearn, Models.ROM.NDinvDistWeight, Steps.RomTrainer
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2015-10-15
 - description: Modified test rom trainer for XSD validation
 2. revision info:
 - author : senrs
 - date : 2015-10-15
 - description: Converted input test file
 3. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 4. revision info:
 - author : talbpaul
 - date : 2016-04-26
 - description: added check for pre existing backup files when validating
 5. revision info:
 - author : alfoa
 - date : 2016-04-27
 - description: New subdirectories structure
 6. revision info:
 - author : maljdan

- date : 2016-05-23
- description: Fixing the failed XSD validation cases.

7. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.12 FRAMEWORK.TEST MULTI TARGET ROM

This test can be found at “./raven/tests/framework/test_multi_target_rom.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.test_multi_target_rom
```

or

```
./run_framework_tests --re=framework.test_multi_target_rom
```

- Test Description:
 - This test is aimed to test the capability of RAVEN to train ROMs that can predict multiple targets at the same time (multiple FOMs)
- Original Author:
 - alfoa
- Creation date:
 - 2014-11-30
- The classes tested in this test are:
 - Steps.RomTrainer, Models.ROM
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
 2. revision info:
 - author : mandd
 - date : 2015-04-20
 - description: Merge remote-tracking branch 'origin/devel' into mandd/DataRename
 3. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 4. revision info:
 - author : alfoa
 - date : 2015-06-21

- description: modified Names + added new capabilities and flexibility in DataObjects + added options block. Modified XSD schema and manual to reflect the modifications
5. revision info:
- author : alfoa
 - date : 2015-09-12
 - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script
6. revision info:
- author : coglj
 - date : 2015-10-13
 - description: Updating test_multi_target_rom to use external models.
7. revision info:
- author : coglj
 - date : 2015-11-17
 - description: Updating to work with scikit-learn 0.17. In the new version of sklearn the rom can not use a classifier anymore.
8. revision info:
- author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
9. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.13 FRAMEWORK.TEST ROM TRAIN FROM ALREADY DUMPED HDF5

This test can be found at “./raven/tests/framework/test_rom_train_from_already_dumped_HDF5.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.test_rom_train_from_already_dumped_HDF5
```

or

```
./run_framework_tests --re=framework.test_rom_train_from_already_dumped_HDF5
```

- Test Description:
 - This test is aimed to test the capability of RAVEN to train ROMs based on the pre-generated data sets (HDF5)
- Original Author:
 - alfoa
- Creation date:
 - 2014-02-26
- The classes tested in this test are:

– Steps.RomTrainer, Models.ROM, Databases.HDF5

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2014-03-06
- description: changed name of DataBase handling, modified all tests were using it, improved Step output handling etc r25347

2. revision info:

- author : maljdan
- date : 2015-06-16
- description: Adding steps to the XSD, and fixing the input files to pass the validation. Currently, using sequences.

3. revision info:

- author : alfoa
- date : 2015-06-18
- description: Changed Name of all DataObjects

4. revision info:

- author : alfoa
- date : 2015-06-21
- description: modified Names + added new capabilities and flexibility in DataObjects + added options block. Modified XSD schema and manual to reflect the modifications

5. revision info:

- author : coglj
- date : 2015-10-13
- description: Converting test_rom_train_from_already_dumped_HDF5 to use external model.

6. revision info:

- author : coglj
- date : 2015-11-17
- description: Updating to work with scikit-learn 0.17. In the new version of sklearn the rom can not use a classifier anymore.

7. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

8. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

9. revision info:

- author : talbpaul
- date : 2017-07-10
- description: Fixed location of database to be specified relative to working directory

2.3.14 FRAMEWORK.TESTFACTORIALS

This test can be found at “./raven/tests/framework/test_FullFactorial_Sampler.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.testFactorials
```

or

```
./run_framework_tests --re=framework.testFactorials
```

- Test Description:
 - This test is aimed to check the mechanics of the FactorialDesign Samping strategy.
- Original Author:
 - alfoa
- Creation date:
 - 2014-12-05
- The classes tested in this test are:
 - Samplers.FactorialDesign
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2015-02-04
 - description: Added algorithm_type in tests and fixed a bug
 2. revision info:
 - author : coglj
 - date : 2015-03-04
 - description: Switching two tests to batch size 1 because they fail sometimes.
 3. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: Conversion to Database and DataObjects
 4. revision info:
 - author : alfoa
 - date : 2015-05-18
 - description: Closes #167
 5. revision info:
 - author : alfoa
 - date : 2015-05-18
 - description: Closes #169
 6. revision info:
 - author : alfoa

- date : 2015-06-18
 - description: Changed Name of all DataObjects
7. revision info:
- author : alfoa
 - date : 2015-09-12
 - description: Removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script
8. revision info:
- author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
9. revision info:
- author : talbpaul
 - date : 2016-04-26
 - description: Added check for pre-existing backup files when validating
10. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.15 FRAMEWORK.TESTRESPONSESURFACEDESIGNS

This test can be found at “./raven/tests/framework/test_ResponseSurfaceDesign_Sampler.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.testResponseSurfaceDesigns
```

or

```
./run_framework_tests --re=framework.testResponseSurfaceDesigns
```

- Test Description:
 - This test is aimed to check the capability in RAVEN to employ a ResponseSurfaceDesign sampling strategy. Since the goal of the test is to testify that the Grid sampling strategy is functional, a Dummy model is used. Both available Response Surface design strategies are tested (BoxBehnken, CentralComposite)
- Original Author:
 - alfoa
- Creation date:
 - 2014-12-06
- The classes tested in this test are:
 - Sampler.ResponseSurfaceDesign
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:

- author : alfoa
 - date : 2015-02-04
 - description: added algorithm_type in tests and fixed a bug
2. revision info:
- author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
3. revision info:
- author : alfoa
 - date : 2015-05-18
 - description: Closes #167
4. revision info:
- author : alfoa
 - date : 2015-05-18
 - description: Closes #169
5. revision info:
- author : alfoa
 - date : 2015-05-29
 - description: finalized all the samplers
6. revision info:
- author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
7. revision info:
- author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
8. revision info:
- author : talbpaul
 - date : 2016-04-26
 - description: added check for pre-existing backup files when validating
9. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.16 FRAMEWORK.TESTGRIDWITHCONSTANTS

This test can be found at “./raven/tests/framework/test_Grid_Sampler_with_constants.xml”.
 This test can be called executing the following command:

```
./run_tests --re=framework.testGridWithConstants
```

or

```
./run_framework_tests --re=framework.testGridWithConstants
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to input constant variables values. This test is valid to demonstrate this capability for any Sampler in RAVEN. In addition, it shows how the constant variables can be used in conjunction with a function.
- Original Author:
 - alfoa
- Creation date:
 - 2017-04-05
- The classes tested in this test are:
 - Sampler.Grid
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-04-24
 - description: added a function to show how the constant variables can be used in conjunction with a function

2.3.17 FRAMEWORK.TESTRANDOM

This test can be found at “./raven/tests/framework/test_random.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.testRandom
```

or

```
./run_framework_tests --re=framework.testRandom
```

- Test Description:
 - This test is aimed to check the functionality of RAVEN to perform random sampling (MonteCarlo) on simple 1Dimensional distributions. Since the goal of the test is to check the Sampler only, a Dummy Model is used.
- Original Author:
 - cogljj
- Creation date:
 - 2014-02-18
- The classes tested in this test are:
 - Samplers.MonteCarlo
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : mandd

- date : 2015-04-17
 - description: conversion to Database and DataObjects
2. revision info:
 - author : alfoa
 - date : 2015-05-18
 - description: Closes #169
 3. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.18 FRAMEWORK.TESTLHS

This test can be found at “./raven/tests/framework/test_LHS_Sampler.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.testLHS
```

or

```
./run_framework_tests --re=framework.testLHS
```

- Test Description:
 - This test is aimed to check the functionality of the Stratified sampling. In order to check this sampling strategy a Model of type Dummy.
- Original Author:
 - crisr
- Creation date:
 - 2013-10-15
- The classes tested in this test are:
 - Samplers.Stratified, Models.Dummy, Steps.MultiRun
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2014-01-21

- description: fixed tests, added new capability in OutStreamPrint + modified check_output test, bug fixes in Datas.py and Steps... Deleted Plotting Step... Not needed SVN r24086
2. revision info:
 - author : alfoa
 - date : 2015-03-04
 - description: modified batch sizes because sometimes, if we run the tests in parallel, the order of values in csv can be different
 3. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
 4. revision info:
 - author : alfoa
 - date : 2015-04-24
 - description: From LHS to Stratified. Closes #130
 5. revision info:
 - author : alfoa
 - date : 2015-05-18
 - description: Closes #167
 6. revision info:
 - author : alfoa
 - date : 2015-05-18
 - description: Closes #169
 7. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 8. revision info:
 - author : maljdan
 - date : 2015-08-20
 - description: Fixing a bug associated with the grid construction used by the LHS sampler. (See issue #266)
 9. revision info:
 - author : wangc
 - date : 2015-09-10
 - description: update validate_xml.sh, convert some test inputs into something mostly RAVEN-preferred
 10. revision info:
 - author : alfoa
 - date : 2015-09-12
 - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script
 11. revision info:
 - author : maljdan

- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

12. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.19 FRAMEWORK.TESTLHS RELAP7

This test can be found at “./raven/tests/framework/test_LHS_Sampler_Raven.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.testLHS_RELAP7
```

or

```
./run_framework_tests --re=framework.testLHS_RELAP7
```

- Test Description:
 - This test is aimed to check the capability in RAVEN to employ a Stratified sampling strategy, using as driven code RELAP7.
- Original Author:
 - cogljj
- Creation date:
 - 2014-03-05
- The classes tested in this test are:
 - Sampler.Stratified
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2014-03-31
 - description: modified executable syntax plus improved stability of outstream system when adaptive is on... r26112
 2. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
 3. revision info:
 - author : alfoa
 - date : 2015-04-24
 - description: From LHS to Stratified. Closes #130
 4. revision info:
 - author : alfoa

- date : 2015-05-18
 - description: Closes #167
5. revision info:
- author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
6. revision info:
- author : alfoa
 - date : 2015-09-12
 - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script
7. revision info:
- author : coglj
 - date : 2016-03-22
 - description: Updating samplers to new RELAP-7 inputs.
8. revision info:
- author : alfoa
 - date : 2016-03-24
 - description: removed controlled variable pipe_Dh since was not set in the input file and consequentially was getting garbage from the memory. In addition, set the raven_init to false in order to avoid to have the init csv into the GridRaven folder that is used to construct a data with the pp LoadIntoInternalDataObject
9. revision info:
- author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
10. revision info:
- author : talbpaul
 - date : 2016-04-26
 - description: Added check for pre-existing backup files when validating
11. revision info:
- author : alfoa
 - date : 2016-04-27
 - description: New subdirectories structure
12. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.20 FRAMEWORK.TESTGRID RELAP7

This test can be found at “. /raven/tests/framework/test_Grid_Sampler_Raven.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.testGrid.RELAP7
```

or

```
./run_framework_tests --re=framework.testGrid.RELAP7
```

- Test Description:
 - This test is aimed to check the capability in RAVEN to employ a Grid sampling strategy, using as driven code RELAP7.
- Original Author:
 - cogljj
- Creation date:
 - 2014-03-05
- The classes tested in this test are:
 - Sampler.Grid
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2014-03-25
 - description: fixed test_Grid_sampler for raven. SVN r25883
 2. revision info:
 - author : alfoa
 - date : 2014-03-31
 - description: modified executable syntax plus improved stability of outstream system when adaptive is on... r26112
 3. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
 4. revision info:
 - author : alfoa
 - date : 2015-05-18
 - description: Closes #167
 5. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 6. revision info:
 - author : alfoa
 - date : 2015-09-12
 - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script

7. revision info:
 - author : alfoa
 - date : 2015-10-01
 - description: Modified a test to make it parallel
8. revision info:
 - author : cogljj
 - date : 2016-03-22
 - description: Updating samplers to new RELAP-7 inputs.
9. revision info:
 - author : alfoa
 - date : 2016-03-24
 - description: removed controlled variable pipe.Dh since was not set in the input file and consequentially was getting garbage from the memory. In addition, set the raven_init to false in order to avoid to have the init csv into the GridRaven folder that is used to construct a data with the pp LoadIntoInternlaDataObject
10. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
11. revision info:
 - author : alfoa
 - date : 2016-04-27
 - description: New subdirectories structure
12. revision info:
 - author : alfoa
 - date : 2016-11-16
 - description: Closes #751
13. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.21 FRAMEWORK.TESTEXTERNALMODELRESEED

This test can be found at “./raven/tests/framework/test_external_reseed.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.testExternalModelReseed
```

or

```
./run_framework_tests --re=framework.testExternalModelReseed
```

- Test Description:
 - This test is aimed to test the capability of the random-based sampling strategies (e.g.MonteCarlo, Stratified, etc.) to change the seeding of the random number generator every time a new realization is requested.

- Original Author:
 - alfoa
- Creation date:
 - 2015-01-26
- The classes tested in this test are:
 - Sampler.MonteCarlo
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
 2. revision info:
 - author : alfoa
 - date : 2015-04-21
 - description: Closes #122
 3. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 4. revision info:
 - author : alfoa
 - date : 2015-09-12
 - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script
 5. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 6. revision info:
 - author : talbpaul
 - date : 2016-04-26
 - description: added check for pre-existing backup files when validating
 7. revision info:
 - author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
 8. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.22 FRAMEWORK.TESTLIMITSURFACEINTEGRALPP

This test can be found at “./raven/tests/framework/test_LimitSurface_and_integral.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework.testLimitSurfaceIntegralPP
```

or

```
./run_framework_tests --re=framework.testLimitSurfaceIntegralPP
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to generate Limit Surfaces from a pre-generated data set (in this case, generated with a MonteCarlo sampling). In addition, this test is aimed to check the capability of RAVEN to compute the integral of the Limit Surface (e.g. Failure probability) both probability-weighted and not.
- Original Author:
 - alfoa
- Creation date:
 - 2015-05-08
- The classes tested in this test are:
 - Models.PostProcessors.LimitSurface, Models.PostProcessors.LimitSurfaceIntegral
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2015-05-11
 - description: Limit surface integral
 2. revision info:
 - author : alfoa
 - date : 2015-05-12
 - description: Closes #153
 3. revision info:
 - author : alfoa
 - date : 2015-06-17
 - description: Closes #213
 4. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 5. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 6. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.23 FRAMEWORK.TESTLIMITSURFACEMULTIGRIDSAMPLING

This test can be found at “./raven/tests/framework/test_limitSurfaceMultiGridMethod.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework.testLimitSurfaceMultiGridSampling
```

or

```
./run_framework_tests --re=framework.testLimitSurfaceMultiGridSampling
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to perform an adaptive sampling strategy of type LimitSurfaceSearch when using the convergence acceleration scheme of type Multi-Grid.
- Original Author:
 - alfoa
- Creation date:
 - 2015-09-10
- The classes tested in this test are:
 - Samplers.LimitSurfaceSearch, Functions.External
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : coglj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
 2. revision info:
 - author : alfoa
 - date : 2015-10-05
 - description: Modified multigrid test to make it faster
 3. revision info:
 - author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
 4. revision info:
 - author : maljdan
 - date : 2016-11-08
 - description: Serializing the adaptive tests and regolding the multigrid case since I can validate the results look good. I am still trying to understand what the correct results for the 3D case are.
 5. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.24 FRAMEWORK.TEST CUSTOM MODE

This test can be found at “./raven/tests/framework/test_custom_mode.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.test_custom_mode
```

or

```
./run_framework_tests --re=framework.test_custom_mode
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to load external Custom dispatching recepies. Run-Info.CustomMode.
- Original Author:
 - cogljj
- Creation date:
 - 2014-04-02
- The classes tested in this test are:
 - JobHandler.ExternalRunner
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
 2. revision info:
 - author : alfoa
 - date : 2015-05-18
 - description: Closes #167
 3. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 4. revision info:
 - author : alfoa
 - date : 2016-04-27
 - description: New subdirectories structure
 5. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.25 FRAMEWORK.UNIT TEST FILES

This test can be found at “./raven/framework/TestFiles.py”. This test can be called executing the following command:

```
./run_tests --re=framework.unit_test_files
```

or

```
./run_framework_tests --re=framework.unit_test_files
```

- Test Description:
 - This test is a Unit Test for the Files classes.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-11-01
- The classes tested in this test are:
 - Files

2.3.26 FRAMEWORK.TEST XSD INPUT DATA

This test can be found at “./raven/tests/framework/TestXSD/TestDataRead.py”. This test can be called executing the following command:

```
./run_tests --re=framework.test_xsd_input_data
```

or

```
./run_framework_tests --re=framework.test_xsd_input_data
```

- Test Description:
 - This test is aimed to check the functionality of the XSD python validator
- Original Author:
 - cogljj
- Creation date:
 - 2016-04-11
- The classes tested in this test are:
 - None
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : cogljj
 - date : 2016-04-12
 - description: Adding a findFirst function to the xml reader.

2. revision info:
 - author : cogljj
 - date : 2016-04-12
 - description: Renaming text to value in ParameterInput
3. revision info:
 - author : cogljj
 - date : 2016-07-05
 - description: Add ability to run without lxml. The first checkes for lxml and skips the test if missing. The second checkes for lxml before running part of the test.
4. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.27 FRAMEWORK.TEST XSD INPUT FAILS

This test can be found at “./raven/tests/framework/TestXSD/TestFails.py”. This test can be called executing the following command:

```
./run_tests --re=framework.test_xsd_input_fails
```

or

```
./run_framework_tests --re=framework.test_xsd_input_fails
```

- Test Description:
 - This test is aimed to check the functionality of the XSD python validator (failure)
- Original Author:
 - cogljj
- Creation date:
 - 2016-04-11
- The classes tested in this test are:
 -
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.28 FRAMEWORK.TEST XML DIFFER

This test can be found at “./raven/tests/framework/TestDiffer/TestXMLDiffer.py”. This test can be called executing the following command:

```
./run_tests --re=framework.test_xml_differ
```

or

```
./run_framework_tests --re=framework.test_xml_differ
```

- Test Description:
 - This test is aimed to check the xml differ program
- Original Author:
 - coglj
- Creation date:
 - 2016-10-21
- The classes tested in this test are:
 - None
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.29 FRAMEWORK.LOAD AND PUSH REUSING SAME HDF5

This test can be found at “./raven/tests/framework/test_load_and_push_reusing_same_hdf5.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.load_and_push_reusing_same_hdf5
```

or

```
./run_framework_tests --re=framework.load_and_push_reusing_same_hdf5
```

- Test Description:
 - This test is aimed to check the possibility in RAVEN to load an HDF5 (pre-generated) and use the same database to store new results.
- Original Author:
 - alfoa
- Creation date:
 - 2016-12-12
- The classes tested in this test are:

- Databases.HDF5

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2016-12-12
- description: Added test

2. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.30 FRAMEWORK ADAPTIVE SAMPLER EXT MODEL

This test can be found at “./raven/tests/framework/test_adaptive_sampler.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/adaptive_sampler_ext_model
```

or

```
./run_framework_tests --re=framework/adaptive_sampler_ext_model
```

- Test Description:

- This test is aimed to test the capability of RAVEN to employ a goal oriented sampling. It tests the LimitSurfaceSearch algorithm using an external model as “system code”

- Original Author:

- @alfoa

- Creation date:

- 2015-04-09

- The classes tested in this test are:

- Samplers.LimitSurfaceSearch, Models.ExternalModel, Models.ROM

2.3.31 FRAMEWORK.SAFEST POINT PP

This test can be found at “./raven/tests/framework/test_safest_point.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.safest_point_pp
```

or

```
./run_framework_tests --re=framework.safest_point_pp
```

- Test Description:

- This test is about the identification of the Safest Point in a set of controllable and un-controllable parameter. In order to do that, a LimitSurfaceSearch sampling is employed and sub-sequentially the PostProcessor of type SafestPoint is used.

- Original Author:
 - alfoa
- Creation date:
 - 2014-11-17
- The classes tested in this test are:
 - Samplers.LimitSurfaceSearch, Models.PostProcessor.SafestPoint, Steps.MultiRun
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
 2. revision info:
 - author : alfoa
 - date : 2015-05-19
 - description: Closes #176
 3. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 4. revision info:
 - author : talbpaul
 - date : 2015-07-07
 - description: standardized tests
 5. revision info:
 - author : cogljj
 - date : 2015-09-29
 - description: Modifng external modules to use relative to working directory.
 6. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 7. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.32 FRAMEWORK.SAFEST POINT CDF PP

This test can be found at “./raven/tests/framework/test_safest_point_cdf.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.safest_point_cdf_pp
```

or

```
./run_framework_tests --re=framework.safest_point_cdf_pp
```

- Test Description:
 - This test is about the identification of the Safest Point in a set of controllable and un-controllable parameter. The un-controllable parameter space is probability weighted in this case. In order to do that, a LimitSurfaceSearch sampling is employed and sub-sequentially the PostProcessor of type SafestPoint is used.
- Original Author:
 - alfoa
- Creation date:
 - 2015-01-22
- The classes tested in this test are:
 - Samplers.LimitSurfaceSearch, Models.PostProcessor.SafestPoint, Steps.MultiRun
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
 2. revision info:
 - author : alfoa
 - date : 2015-05-19
 - description: Closes #176
 3. revision info:
 - author : talbpaul
 - date : 2015-06-04
 - description: regolding after SG feature ordering, also changed Adaptive sampler to LimitSurfaceSearch sampler
 4. revision info:
 - author : coglj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
 5. revision info:
 - author : maljdan
 - date : 2016-04-06

- description: Updating test cases to reflect the changes to the user input.
6. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.33 FRAMEWORK STOCHPOLYINTERPTEST

This test can be found at “./raven/tests/framework/test_stochpoly_interp.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/stochPolyInterpTest
```

or

```
./run_framework_tests --re=framework/stochPolyInterpTest
```

- Test Description:
 - This test checks the use of the ”interpolation” blocks for the SCgPC methodology.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-07-07
- The classes tested in this test are:
 - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.3.34 FRAMEWORK.ND EXTERNAL LHS

This test can be found at “./raven/tests/framework/test_simple_ND_external_LHS.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.ND_external_LHS
```

or

```
./run_framework_tests --re=framework.ND_external_LHS
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to handle ND probability density functions (distributions), when a Stratified sampling strategy is performed. In this case, the capability to use a globalGrid specification, when the discretization is performed in CDF.
- Original Author:
 - mandd
- Creation date:
 - 2015-03-04

- The classes tested in this test are:
 - Distributions.NDInverseWeight, Distrubtions.NDCartesianSpline, Samplers.Stratified
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
 2. revision info:
 - author : alfoa
 - date : 2015-04-24
 - description: From LHS to Stratified. Closes #130
 3. revision info:
 - author : alfoa
 - date : 2015-05-28
 - description: fixed Stratified Sampler bug (=¿ regolding) +
 4. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 5. revision info:
 - author : alfoa
 - date : 2015-09-12
 - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script
 6. revision info:
 - author : coglj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
 7. revision info:
 - author : wangc
 - date : 2015-10-22
 - description: fix several bugs inside stratified sampler, a test is added to prevent the bugs, and xml output file is added for the testing to prevent the bugs
 8. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 9. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.35 FRAMEWORK.ND EXTERNAL GRID VALUE

This test can be found at “./raven/tests/framework/test_simple_ND_external_grid_value.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.ND_external_grid_value
```

or

```
./run_framework_tests --re=framework.ND_external_grid_value
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to handle ND probability density functions (distributions), when a Grid sampling strategy is performed. In this case, the capability to construct marginal distributions (for each uncertainties of the ND distribution domain), when the discretization is performed in VALUE.
- Original Author:
 - mandd
- Creation date:
 - 2015-03-04
- The classes tested in this test are:
 - Distributions.NDInverseWeight, Distrubtions.NDCartesianSpline, Samplers.Grid
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : mandd
 - date : 2015-04-17
 - description: conversion to Database and DataObjects
 2. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 3. revision info:
 - author : coglj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
 4. revision info:
 - author : wangc
 - date : 2015-09-30
 - description: improve efficiency when calculate the SampledVarsPb with N-Dimensional PDF, fix the issue #298
 5. revision info:
 - author : maljdan
 - date : 2016-04-06

- description: Updating test cases to reflect the changes to the user input.
6. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.36 FRAMEWORK.ND EXTERNAL GRID CDF

This test can be found at “./raven/tests/framework/test_simple_ND_external_grid_cdf.xml”.
 This test can be called executing the following command:

```
./run_tests --re=framework.ND_external_grid_cdf
```

or

```
./run_framework_tests --re=framework.ND_external_grid_cdf
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to handle ND probability density functions (distributions), when a Grid sampling strategy is performed. In this case, the capability to construct marginal distributions (for each uncertainties of the ND distribution domain), when the discretization is performed in CDF.
- Original Author:
 - mandd
- Creation date:
 - 2015-03-04
- The classes tested in this test are:
 - Distributions.NDInverseWeight, Distrubtions.NDCartesianSpline, Samplers.Grid
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : mandd
 - date : 2015-03-09
 - description: test fixes
 2. revision info:
 - author : mandd
 - date : 2015-03-09
 - description: test fixes
 3. revision info:
 - author : mandd
 - date : 2015-03-09
 - description: fix tests
 4. revision info:
 - author : mandd

- date : 2015-04-17
 - description: conversion to Database and DataObjects
5. revision info:
 - author : senrs
 - date : 2015-05-18
 - description: update the test cases
 6. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 7. revision info:
 - author : talbpaul
 - date : 2015-07-06
 - description: standardization of tests
 8. revision info:
 - author : talbpaul
 - date : 2015-07-06
 - description: Revert "standardization of tests" This reverts commit 68099325e8daba0f756179a20b5c75ba651cb62d.
 9. revision info:
 - author : talbpaul
 - date : 2015-07-06
 - description: updated tests, added script
 10. revision info:
 - author : talbpaul
 - date : 2015-07-07
 - description: updated to restrict partial-node comments
 11. revision info:
 - author : talbpaul
 - date : 2015-07-07
 - description: standardized tests
 12. revision info:
 - author : talbpaul
 - date : 2015-07-09
 - description: tests pass, except LSIntegral needs regolding
 13. revision info:
 - author : coglj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
 14. revision info:
 - author : wangc
 - date : 2015-09-30

- description: improve efficiency when calculate the SampledVarsPb with N-Dimensional PDF, fix the issue #298
15. revision info:
- author : wangc
 - date : 2015-09-30
 - description: add new tests for the issue #298
16. revision info:
- author : alfoa
 - date : 2015-10-06
 - description: modified all the other files
17. revision info:
- author : alfoa
 - date : 2015-10-06
 - description: final modifications
18. revision info:
- author : alfoa
 - date : 2015-10-06
 - description: Merge branch 'devel' of hpcgitlab.inl.gov:idaholab/raven into wangc/fix_bug
19. revision info:
- author : alfoa
 - date : 2015-10-15
 - description: merged devel and resolved conflicts
20. revision info:
- author : mandd
 - date : 2015-11-04
 - description: edits
21. revision info:
- author : mandd
 - date : 2015-11-06
 - description: edits
22. revision info:
- author : mandd
 - date : 2015-11-17
 - description: final merging with devel
23. revision info:
- author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
24. revision info:
- author : mandd
 - date : 2016-02-11
 - description: merged with devel

25. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

26. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.37 FRAMEWORK.ND TEST MC MVN

This test can be found at “./raven/tests/framework/test_simple_ND_external_MC_MVN.xml”.

This test can be called executing the following command:

```
./run_tests --re=framework.ND_test_MC_MVN
```

or

```
./run_framework_tests --re=framework.ND_test_MC_MVN
```

- Test Description:

- This test is aimed to check the capability of RAVEN to handle MultivariateNormal probability density functions (distributions), when a MonteCarlo sampling strategy is performed.

- Original Author:

- mandd

- Creation date:

- 2015-04-15

- The classes tested in this test are:

- Distributions.MultivariateNormal, Samplers.MonteCarlo

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2015-06-18
- description: Changed Name of all DataObjects

2. revision info:

- author : wangc
- date : 2015-07-02
- description: nd multivariate distribution improvement

3. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

4. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.38 FRAMEWORK TEST COMPARISON STATISTICS

This test can be found at “./raven/tests/framework/test_cc_stats.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/test_comparison_statistics
```

or

```
./run_framework_tests --re=framework/test_comparison_statistics
```

- Test Description:
 - Tests the comparison statistics class including both two PointSets and PointSet to distribution.
- Original Author:
 - cogljj
- Creation date:
 - 2014-10-16
- The classes tested in this test are:
 - ComparisonStatistics
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-10-17
 - description: Removed support for PointSet output for ComparisonStatisticsModule

2.3.39 FRAMEWORK.DISTS VARS

This test can be found at “./raven/tests/framework/test_distribution_combination.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.dists_vars
```

or

```
./run_framework_tests --re=framework.dists_vars
```

- Test Description:
 - This test is aimed to check the capability in RAVEN to combine 1Dimensional and NDimensional probability density functions in the same sampling strategy. In this test a NDimensional distribution (Custom) is used in conjunction with 3 1Dimensional Exponential distributions, in a MonteCarlo sampling strategy.
- Original Author:
 - mandd
- Creation date:
 - 2015-05-13
- The classes tested in this test are:

- Distributions.Exponential, Distributions.NDCartesianSpline, Sampler.MonteCarlo
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2015-06-18
 - description: Changed Name of all DataObjects
 2. revision info:
 - author : maljdan
 - date : 2015-06-24
 - description: Adding DataObjects and fixing Distributions in the XSD.
 3. revision info:
 - author : alfoa
 - date : 2015-09-12
 - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script
 4. revision info:
 - author : coglj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
 5. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 6. revision info:
 - author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
 7. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.40 FRAMEWORK.REDUNDANTINPUTS

This test can be found at “./raven/tests/framework/test_redundant_inputs.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.redundantInputs
```

or

```
./run_framework_tests --re=framework.redundantInputs
```

- Test Description:

- This test is aimed to check the capability of RAVEN to treat redundant input variables. This test shows how some of the variables defined in the Samplers, can be associated to Functions (External) instead of Distributions. In this way, the user can “sample” the variable as combination of the other variables.

- Original Author:

- talbpaul

- Creation date:

- 2015-06-25

- The classes tested in this test are:

- Samplers.Sampler, Functions.External

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : wangc
- date : 2015-09-22
- description: fix the bug #296

2. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

3. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.41 FRAMEWORK.REDUNDANTINPUTSSCGPC

This test can be found at “./raven/tests/framework/test_redundant_scgpc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.redundantInputsSCgPC
```

or

```
./run_framework_tests --re=framework.redundantInputsSCgPC
```

- Test Description:

- This test is aimed to check the capability of RAVEN to treat redundant input variables, when the Sampler of type “SparseGridCollocation” is used. This test shows how some of the variables defined in the Sampler, can be associated to Functions (External) instead of Distributions. In this way, the user can “sample” the variable as combination of the other variables.

- Original Author:

- talbpaul

- Creation date:

- 2016-01-07

- The classes tested in this test are:

- Samplers.SparseGridCollocation, Functions.External

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-01-07
- description: Tests updated

2. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

3. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.42 FRAMEWORK.REDUNDANTINPUTSSOBOL

This test can be found at “./raven/tests/framework/test_redundant_sobol.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.redundantInputsSobol
```

or

```
./run_framework_tests --re=framework.redundantInputsSobol
```

- Test Description:

- This test is aimed to check the capability of RAVEN to treat redundant input variables, when the Sampler of type “Sobol” is used. This test shows how some of the variables defined in the Sampler, can be associated to Functions (External) instead of Distributions. In this way, the user can “sample” the variable as combination of the other variables.

- Original Author:

- talbpaul

- Creation date:

- 2016-01-07

- The classes tested in this test are:

- Samplers.Sobol, Functions.External

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : coglj

- date : 2016-01-15
 - description: Rename step in sobol test to avoid directry name collision. Closes #400. Both test_redundant_scgpc and test_redundant_sobol were using the directory RedundantInputs/sim_py_SC which could cause test failures. This renames the one that redundant_sobol uses.
2. revision info:
- author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
3. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.43 FRAMEWORK.FAILRUNSMC

This test can be found at “./raven/tests/framework/test_failruns_MC.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.failrunsMC
```

or

```
./run_framework_tests --re=framework.failrunsMC
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to identify failures (Model crashes in some realizations) when a sampling strategy is employed.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-08-25
- The classes tested in this test are:
 - Steps.MultiRun
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2015-09-12
 - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script
 2. revision info:
 - author : cogljj
 - date : 2015-09-29
 - description: Modifng external modules to use relative to working directory.

3. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

4. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.44 FRAMEWORK.NDGRIDPROBABILITYWEIGHTCDF

This test can be found at “./raven/tests/framework/test_simple_ND_grid_probabilityWeight_cdf.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.NDGridProbabilityWeightCDF
```

or

```
./run_framework_tests --re=framework.NDGridProbabilityWeightCDF
```

- Test Description:

- This test is aimed to check the capability of RAVEN to handle ND probability density functions (distributions), when a Grid sampling strategy is performed. In this case, the capability to construct marginal distributions (for each uncertainties of the ND distribution domain), when the discretization is performed in CDF.

- Original Author:

- wangc

- Creation date:

- 2015-09-30

- The classes tested in this test are:

- Distributions.NDInverseWeight, Distrubtions.NDCartesianSpline, Samplers.Grid

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2015-10-15
- description: merged devel and resolved conflicts

2. revision info:

- author : mandd
- date : 2015-11-06
- description: edits

3. revision info:

- author : mandd
- date : 2015-11-17

- description: final merging with devel
- 4. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
- 5. revision info:
 - author : mandd
 - date : 2016-02-11
 - description: merged with devel
- 6. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
- 7. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.45 FRAMEWORK.NDGRIDPROBABILITYWEIGHTVALUE

This test can be found at “./raven/tests/framework/test_simple_ND_grid_probabilityWeight_value.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.NDGridProbabilityWeightValue
```

or

```
./run_framework_tests --re=framework.NDGridProbabilityWeightValue
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to handle ND probability density functions (distributions), when a Grid sampling strategy is performed. In this case, the capability to construct marginal distributions (for each uncertainties of the ND distribution domain), when the discretization is performed in VALUE.
- Original Author:
 - wangc
- Creation date:
 - 2015-09-30
- The classes tested in this test are:
 - Distributions.NDInverseWeight, Distrubtions.NDCartesianSpline, Samplers.Grid
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul

- date : 2016-02-08
 - description: first update, looking for more failing tests to add
2. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.46 FRAMEWORK.LHSVARIABLES

This test can be found at “./raven/tests/framework/test_LHS_variables.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.LHSVARIABLES
```

or

```
./run_framework_tests --re=framework.LHSVARIABLES
```

- Test Description:
 - This test is aimed to check the capability in RAVEN to employ a Stratified sampling strategy (LHS- equally spaced in CDF). Since the goal of the test is to testify that the Stratified sampling strategy is functional, a Dummy model is used.
- Original Author:
 - wangc
- Creation date:
 - 2015-10-22
- The classes tested in this test are:
 - Sampler.Stratified
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : cogljj
 - date : 2015-10-29
 - description: Moving comment to third line and removing #
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan

- date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
4. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.47 FRAMEWORK FAIL CSV

This test can be found at “./raven/tests/framework/test_simple_fail_csv.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/fail_csv
```

or

```
./run_framework_tests --re=framework/fail_csv
```

- Test Description:
 - Tests the test harness by checking that differences in the csv file cause the test to fail (but it passes because expected_fail is used in the tests file). If the CSV check passes, then this will fail the test.
- Original Author:
 - cogljj
- Creation date:
 - 2016-04-14
- The classes tested in this test are:
 - TestHarness.testers.RavenFramework

2.3.48 FRAMEWORK FAIL XML

This test can be found at “./raven/tests/framework/test_simple_fail_xml.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/fail_xml
```

or

```
./run_framework_tests --re=framework/fail_xml
```

- Test Description:
 - Tests the test harness by checking that differences in the xml file cause the test to fail (but it passes because expected_fail is used in the tests file). If the XML check passes, then this will fail the test.
- Original Author:
 - cogljj
- Creation date:
 - 2016-04-14
- The classes tested in this test are:
 - TestHarness.testers.XMLDiff,TestHarness.testers.RavenFramework

2.3.49 FRAMEWORK.SIMULATIONTAGS

This test can be found at “./raven/tests/framework/test_sim_tags.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.SimulationTags
```

or

```
./run_framework_tests --re=framework.SimulationTags
```

- Test Description:
 - This test is aimed to check the functionality of the options that can be defined in the Simulation block (attributes), such as “color”, “printTimeStamps” and “verbosity”.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-02-18
- The classes tested in this test are:
 - Simulation
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.50 FRAMEWORK.TESTSTRATIFIEDLARGESIZE

This test can be found at “./raven/tests/framework/test_stratified_dummy_model_large_grid_size.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.testStratifiedLargeSize
```

or

```
./run_framework_tests --re=framework.testStratifiedLargeSize
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to perform a Stratified Sampling strategy of large size [(16 uncertainties and 2 nodes each) and (16 uncertainties and 161 nodes each)]. An external model is used, the results are stored the results into a Database of type HDF5 and Dataobjects of type PointSet. In addition, it prints the results (contained in the DataObjects) in a CSV file (OutStreams of type Print)

- Original Author:
 - alfoa
- Creation date:
 - 2016-04-11
- The classes tested in this test are:
 - OutStreams.Print, DataObjects.PointSet, Databases.HDF5, Steps.MultiRun, Samplers.Stratified
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-04-13
 - description: new syntax for OutStreamManger -> OutStreams
 2. revision info:
 - author : talbpaul
 - date : 2016-04-26
 - description: added check for pre-existing backup files when validating
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.51 FRAMEWORK.CUSTOM1D

This test can be found at “./raven/tests/framework/test_distributionCustom1D.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.custom1D
```

or

```
./run_framework_tests --re=framework.custom1D
```

- Test Description:
 - This test is aimed to check the capability of RAVEN to handle custom probability density functions (distributions).
- Original Author:
 - mandd
- Creation date:
 - 2016-08-08
- The classes tested in this test are:
 - Distributions.Custom1D
- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.52 FRAMEWORK.NEWERDATABASEWITHFILENAME

This test can be found at “./raven/tests/framework/test_new_database_with_filename.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.newerDatabaseWithFilename
```

or

```
./run_framework_tests --re=framework.newerDatabaseWithFilename
```

- Test Description:

- This test is aimed to check the possibility in RAVEN to create a newer Database (HDF5) with a specific name

- Original Author:

- alfoa

- Creation date:

- 2016-12-12

- The classes tested in this test are:

- Databases.HDF5

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2017-05-19
- description: Added test

2.3.53 FRAMEWORK.TESTLIMITSURFACEPOSTPROCESSORWITHREGRESSOR

This test can be found at “./raven/tests/framework/test_LimitSurface_regressor_inverseWeight.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.testLimitSurfacePostProcessorWithRegressor
```

or

```
./run_framework_tests --re=framework.testLimitSurfacePostProcessorWithRegressor
```

- Test Description:

- This test is aimed to check the capability of RAVEN to generate Limit Surfaces, using a regressor surrogate model instead of a classifier, from a pre-generated data set (in this case, generated with a MonteCarlo sampling), outputting the generated Limit Surface in DataObject.PointSet(s) reporting both transition boundaries (-1 1) or just one of them.

- Original Author:
 - alfoa
- Creation date:
 - 2014-07-10
- The classes tested in this test are:
 - Models.PostProcessors.LimitSurface, Functions.External, Models.ROM
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-06-02
 - description: Adding this test description.

2.3.54 FRAMEWORK.HDF5SELECTIVE

This test can be found at “./raven/tests/framework/hdf5_selective.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.HDF5selective
```

or

```
./run_framework_tests --re=framework.HDF5selective
```

- Test Description:
 - Tests the ability for HDF5 databases to selectively store data by defining variable blocks. Without the selectivity, the resulting HDF5 is 220 KB (all.hdf5). With selectivity, the resulting HDF5 is 187 KB (sine.hdf5).
- Original Author:
 - talbpaul
- Creation date:
 - 2017-07-06
- The classes tested in this test are:
 - Databases.HDF5

2.3.55 FRAMEWORK.HDF5LOCATION

This test can be found at “./raven/tests/framework/hdf5_location.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.HDF5location
```

or

```
./run_framework_tests --re=framework.HDF5location
```

- Test Description:
 - Tests that the location specified for the HDF5 is relative to the working dir, not to the run dir.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-07-10
- The classes tested in this test are:
 - Databases.HDF5

2.3.56 FRAMEWORK ALIASSYSTEMTESTS.TESTROMALIASED

This test can be found at “./raven/tests/framework/aliasSystemTests/test_rom_aliased.xml”.
 This test can be called executing the following command:

```
./run_tests --re=framework/aliasSystemTests.testROMAliased
```

or

```
./run_framework_tests --re=framework/aliasSystemTests.testROMAliased
```

- Test Description:
 - An example of using the the alias system in RAVEN with a ROM Model. This capability allows the user to alias Models variables within the RAVEN framework
- Original Author:
 - alfoa
- Creation date:
 - 2016-11-18
- The classes tested in this test are:
 - Models.ROM, Models.AliasSystem
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-11-22
 - description: Closes #754
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.57 FRAMEWORK ALIASSYSTEMTESTS.TESTEXTERNALMODELALIASED

This test can be found at “./raven/tests/framework/aliasSystemTests/test_external_model_aliased.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/aliasSystemTests.testExternalModelAliased
```

or

```
./run_framework_tests --re=framework/aliasSystemTests.testExternalModelAliased
```

- Test Description:
 - An example of using the the alias system in RAVEN with an External Model. This capability allows the user to alias Models variables within the RAVEN framework
- Original Author:
 - alfoa
- Creation date:
 - 2016-11-18
- The classes tested in this test are:
 - Models.ExternalModel, Models.AliasSystem
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-11-22
 - description: Closes #754
 2. revision info:
 - author : alfoa
 - date : 2016-11-28
 - description: Added XSD schema and Closes #756
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.58 FRAMEWORK ALIASSYSTEMTESTS.TESTENSEMBLEMODELALIASED

This test can be found at “./raven/tests/framework/aliasSystemTests/test_ensemble_model_aliased.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/aliasSystemTests.testEnsembleModelAliased
```

or

```
./run_framework_tests --re=framework/aliasSystemTests.testEnsembleModelAliased
```

- Test Description:

- An example of using the the alias system in RAVEN with an Ensemble Model. This capability allows the user to alias Models variables within the RAVEN framework
- Original Author:
 - alfoa
- Creation date:
 - 2016-11-30
- The classes tested in this test are:
 - Models.EnsembleModel, Models.AliasSystem
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.59 FRAMEWORK CODEINTERFACETESTS.TESTMCMAMMOTH BISONRELAP7

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_perturb_mammoth_exe_bison_relap7.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testMCMammoth.BisonRelap7
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testMCMammoth.BisonRelap7
```

- Test Description:
 - An example of using the MAMMOTH code interface. It runs Bison and RELAP7. This test is designed to ensure the MAMMOTH interface mechanics is correctly functional.
- Original Author:
 - tompjame
- Creation date:
 - 2016-08-29
- The classes tested in this test are:
 - Models.Code.MAMMOTH
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: Test updates
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.60 FRAMEWORK CODEINTERFACETESTS.TESTMCMAMMOTHNOEXECUTABLE BISONRELAP7

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_perturb_mammoth_bison_relap7.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testMCMammothNoExecutable_BisonRelap7
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testMCMammothNoExecutable_BisonRe
```

- Test Description:
 - An example of using the MAMMOTH code interface (no executable). It checks Bison and RELAP7. This test is designed to ensure the MAMMOTH interface mechanics is correctly functional. In addition it used the RAVEN alias system.
- Original Author:
 - tompjame
- Creation date:
 - 2016-08-29
- The classes tested in this test are:
 - Models.Code.MAMMOTH, Models.AliasSystem
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: Test updates
 2. revision info:
 - author : alfoa
 - date : 2016-11-30
 - description: Added alias for MAMMOTH just to test the new system
 3. revision info:
 - author : alfoa
 - date : 2016-12-12
 - description: Added type for alias system in mammoth test
 4. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.61 FRAMEWORK CODEINTERFACETESTS.TESTMCMAMMOTHNOEXECUTABLEBISONRELAP7WITHHDF5R

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_mammoth_r7_bison_no_exe_hdf5_restart.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testMCMammothNoExecutableBisonRelap7WithHD
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testMCMammothNoExecutableBisonRel
```

- Test Description:
 - An example of using the MAMMOTH code interface (no executable). This test is designed to ensure the MAMMOTH interface mechanics is correctly functional. In addition, the alias system is used
- Original Author:
 - alfoa
- Creation date:
 - 2016-12-15
- The classes tested in this test are:
 - Models.Code.MAMMOTH, Model.AliasSystem
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-12-15
 - description: modified test in order to be validable by XSD schema
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.62 FRAMEWORK CODEINTERFACETESTS.TESTMCMAMMOTHNOEXECUTABLE RATTLESNAKE-BISON

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_perturb_all_rattlesnake_bison.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testMCMAMMOTHNoExecutable.RattlesnakeBison
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testMCMAMMOTHNoExecutable.Rattles
```

- Test Description:
 - An example of using the MAMMOTH code interface (no executable). It checks Bison and RattleSnake. This test is designed to ensure the MAMMOTH interface mechanics is correctly functional, overall for Neutron Cross section perturbation.

- Original Author:
 - tompjame
- Creation date:
 - 2016-08-29
- The classes tested in this test are:
 - Models.Code.MAMMOTH
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.63 FRAMEWORK CODEINTERFACETESTS.TESTPERTURBMAMMOTHNOEXECUTABLE RATTLESNAKE-BISON

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_perturb_mammoth_rattlesnake_bison.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testPerturbMAMMOTHNoExecutable_RattlesnakeB
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testPerturbMAMMOTHNoExecutable_R
```

- Test Description:
 - An example of using the MAMMOTH code interface. This test is designed to ensure the MAMMOTH interface runs correctly. It runs BISON and RattleSnake.
- Original Author:
 - tompjame
- Creation date:
 - 2016-08-29
- The classes tested in this test are:
 - Models.Code.MAMMOTH
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15

- description: Test updates
2. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.64 FRAMEWORK CODEINTERFACETESTS.TESTGRIDBISON

This test can be found at “. /raven/tests/framework/CodeInterfaceTests/test_Grid_Sampler_Bison.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testGridBison
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testGridBison
```

- Test Description:
 - An example of using the MooseBasedApp code interface. This test is designed to ensure the MooseBasedApp interface runs correctly, when used with a Grid sampling approach.
- Original Author:
 - senrs
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - Models.Code.MooseBasedApp, Samplers.Grid
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 2. revision info:
 - author : talbpaul
 - date : 2016-04-26
 - description: Added check for pre-existing backup files when validating
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.65 FRAMEWORK CODEINTERFACETESTS.TESTGRIDRATTLESNAKE

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_Grid_Sampler_rattlesnake.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testGridRattlesnake
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testGridRattlesnake
```

- Test Description:
 - An example of using the code interface of type MooseBasedApp for perturbing a RattleSnake input (when XS are not needed to be perturbed)
- Original Author:
 - wangc
- Creation date:
 - 2016-04-20
- The classes tested in this test are:
 - Models.Code.MooseBasedApp
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : wangc
 - date : 2016-04-20
 - description: Update the input file, because OutStreamManager is changed to OutStreams
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.66 FRAMEWORK CODEINTERFACETESTS.TESTLHSBISON

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_LHS_Sampler_Bison.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testLHSBison
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testLHSBison
```

- Test Description:
 - An example of using the the Model Code of type MooseBasedApp. This test is aimed to show the usage of the code interface MooseBasedApp in order to test its mechanics
- Original Author:
 - senrs

- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - Models.Code.MooseBasedApp
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 2. revision info:
 - author : talbpaul
 - date : 2016-10-25
 - description: Removed dim in OutStream Plot for validation purposes
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.67 FRAMEWORK CODEINTERFACETESTS.TESTLHSFERRET

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_LHS_Sampler_ferret.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testLHSFerret
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testLHSFerret
```

- Test Description:
 - An example of using the the Model Code of type MooseBasedApp for Ferret code. This test is aimed to show the usage of the code interface MooseBasedApp in order to test its mechanics
- Original Author:
 - senrs
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - Models.Code.MooseBasedApp
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul

- date : 2016-04-26
 - description: Added check for pre-existing backup files when validating
2. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.68 FRAMEWORK CODEINTERFACETESTS.RELAP5INTERFACETESTNOEXECUTABLE

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_relap5_code_interface.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.RELAP5interfaceTestNoExecutable
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.RELAP5interfaceTestNoExecutable
```

- Test Description:
 - An example of using the RELAP5 code interface. This test is aimed to test the mechanics of the interface (no executable).
- Original Author:
 - alfoa
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - Models.Code.RELAP5
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-03-24
 - description: New relap5 test case
 2. revision info:
 - author : talbpaul
 - date : 2016-04-26
 - description: Added check for pre-existing backup files when validating
 3. revision info:
 - author : alfoa
 - date : 2016-08-02
 - description: Added new gold, since the case has been changed
 4. revision info:
 - author : talbpaul
 - date : 2016-09-15

- description: Test updates
- 5. revision info:
 - author : alfoa
 - date : 2016-11-17
 - description: Closes #750
- 6. revision info:
 - author : alfoa
 - date : 2016-11-17
 - description: Added alias for output system
- 7. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.69 FRAMEWORK CODEINTERFACETESTS.RELAP5INTERFACETESTSINGLERUNNOEXECUTABLE

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_relap5_code_interface_single_run.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.RELAP5interfaceTestSingleRunNoExecutable
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.RELAP5interfaceTestSingleRunNoExe
```

- Test Description:
 - An example of using the RELAP5 code interface with a SingleRun step. This test is aimed to test the mechanics of the interface (no executable).
- Original Author:
 - alfoa
- Creation date:
 - 2017-04-01
- The classes tested in this test are:
 - Models.Code.RELAP5

2.3.70 FRAMEWORK CODEINTERFACETESTS.RELAP5INTERFACETESTALIASALIASNOEXECUTABLE

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_relap5_code_interface_alias.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.RELAP5interfaceTestAliasAliasNoExecutable
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.RELAP5interfaceTestAliasAliasNoExe
```

- Test Description:

- An example of using the RELAP5 code interface. This test is aimed to test the mechanics of the interface (no executable), when the RAVEN alias system is used.

- Original Author:

- alfoa

- Creation date:

- 2016-11-28

- The classes tested in this test are:

- Models.Code.RELAP5

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.71 FRAMEWORK CODEINTERFACETESTS.RELAP5INTERFACEMULTDECKTESTNOEXECUTABLE

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_relap5_code_interface_multideck.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.RELAP5interfaceMultDeckTestNoExecutable
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.RELAP5interfaceMultDeckTestNoExec
```

- Test Description:

- An example of using the Relap5 code interface. This test is aimed to test the mechanics of the interface (no executable) when a multi-deck type of input needs to be perturbed.

- Original Author:

- alfoa

- Creation date:

- 2016-05-03

- The classes tested in this test are:

- Models.Code.Relap5

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: Test updates

2. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.72 FRAMEWORK CODEINTERFACETESTS.RELAP5INTERFACEMULTDECKTESTCHOOSINGDECKNOEXECU

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_relap5_code_interface_multideck_choosing_deck_output.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.RELAP5interfaceMultDeckTestChoosingDeckNoEx
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.RELAP5interfaceMultDeckTestChoosin
```

- Test Description:
 - An example of using the RELAP5 code interface. This test is aimed to test the mechanics of the interface (no executable), when a multi deck input is used (and needs to be perturbed).
- Original Author:
 - alfoa
- Creation date:
 - 2016-07-07
- The classes tested in this test are:
 - Models.Code.Relap5
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: Test updates
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.73 FRAMEWORK CODEINTERFACETESTS.TESTMC

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_mc_rattlesnake.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testMC
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testMC
```

- Test Description:
 - An example of using the Rattlesnake code interface. This test is aimed to test the mechanics of the interface (no executable)..
- Original Author:

- wangc
- Creation date:
 - 2016-05-09
- The classes tested in this test are:
 - Models.Code.Rattlesnake
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: Test updates
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.74 FRAMEWORK CODEINTERFACETESTS OPENMODELICAINTERFACETESTNOEXECUTABLE

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_OpenModelica_code_interface.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/OpenModelicaInterfaceTestNoExecutable
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/OpenModelicaInterfaceTestNoExecut
```

- Test Description:
 - The purpose of this test is to exercise the OpenModelica external code interface without needing to have a built executable. It is directly modeled on the test_relap5_code_interface.xml test and works by making sure that 1) The input files are perturbed correctly 2) That the raw output CSV files are properly processed for reading by RAVEN
- Original Author:
 - @bobk
- Creation date:
 - 2015-06-11
- The classes tested in this test are:
 - CodeInterfaces.OpenModelica
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : @talbpaul
 - date : 2016-04-26
 - description: Added check for pre-existing HDF5 backup files when validating

2.3.75 FRAMEWORK CODEINTERFACETESTS DYMOLAINTERFACETESTNOEXECUTABLE

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_Dymola_code_interface.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/DymolaInterfaceTestNoExecutable
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/DymolaInterfaceTestNoExecutable
```

- Test Description:
 - The purpose of this test is to exercise the Dymola external code interface without needing to have a built executable. It is directly modeled on the test_relap5_code_interface.xml test and works by making sure that
1) The input files are perturbed correctly 2) The raw output MAT files are properly processed for reading by RAVEN
- Original Author:
 - @kimj
- Creation date:
 - 2015-11-11
- The classes tested in this test are:
 - CodeInterfaces.Dymola
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : @talbpaul
 - date : 2016-04-26
 - description: Added check for pre-existing HDF5 backup files when validating

2.3.76 FRAMEWORK CODEINTERFACETESTS.DYMOLATESTLOADSOMEVARSNOEXECUTABLE

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_Dymola_code_interface_load_some_vars.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.DymolaTestLoadSomeVarsNoExecutable
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.DymolaTestLoadSomeVarsNoExecutable
```

- Test Description:
 - The purpose of this test is to exercise the Dymola external code interface without needing to have a built executable. This special case shows how to load just few output variables from the Dymola outputs (e.g. .mat files). In this case only the variables e,g and h will be loaded
- Original Author:
 - @alfoa
- Creation date:

– 2017-09-16

- The classes tested in this test are:
 - CodeInterfaces.Dymola

2.3.77 FRAMEWORK CODEINTERFACETESTS DYMOLATESTTIMEDEPNOEXECUTABLEENSEMBLE-MODEL

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_Dymola_code_interface_timedep.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/DymolaTestTimeDepNoExecutableEnsembleModel
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/DymolaTestTimeDepNoExecutableEnsembleModel
```

- Test Description:
 - The purpose of this test is to ensure that the Dymola external code interface functions properly with the new ensemble model functionality. Since the output files have been pre-generated, a Dymola executable is not necessary to run this test.
- Original Author:
 - alfoa
- Creation date:
 - 2016-11-11
- The classes tested in this test are:
 - Models.EnsembleModel,CodeInterfaces.OpenModelica
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : @alfoa
 - date : 2016-12-01
 - description: Fixed order of test inputs to respect XSD schema

2.3.78 FRAMEWORK CODEINTERFACETESTS.GENERICINTERFACE2

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_generic_interface.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.genericInterface2
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.genericInterface2
```

- Test Description:
 - An example of using the the Model Code of type GenericCode. This test is aimed to show the usage of the GenericCode interface present in RAVEN in order to drive an external code using the wild cards approach

- Original Author:
 - senrs
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - Models.Code.GenericCode
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-01-04
 - description: Re-golded for updated external model variables
 2. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.79 FRAMEWORK CODEINTERFACETESTS.GENERICINTERFACEPARALLEL

This test can be found at “./raven/tests/framework/CodeInterfaceTests/generic_parallel.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.genericInterfaceParallel
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.genericInterfaceParallel
```

- Test Description:
 - Tests using "Files" in an internalParallel run (which tests pickling and unpickling them).
- Original Author:
 - talbpaul
- Creation date:
 - 2017-08-24
- The classes tested in this test are:
 - Models.Code.GenericCode, Files
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2017-08-24
 - description: Created

2.3.80 FRAMEWORK CODEINTERFACETESTS.GENERICINTERFACEIO

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_generic_IO.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.genericInterfaceIO
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.genericInterfaceIO
```

- Test Description:
 - An example of using the the Model Code of type GenericCode. This test is aimed to test the IO system present in the GenericCode interface.
- Original Author:
 - senrs
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - Models.Code.GenericCode
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.81 FRAMEWORK CODEINTERFACETESTS.GENERICINTERFACEIOCUSTOMOUTPUT

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_generic_interface_custom_out_file.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.genericInterfaceIOCustomOutput
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.genericInterfaceIOCustomOutput
```

- Test Description:
 - An example of using the the Model Code of type GenericCode with a code that produces CSV output file. This test is aimed to test the IO system present in the GenericCode interface. In XML node outputFile the user can specify the specific output file name RAVEN is going to load.
- Original Author:

- alfoa
- Creation date:
 - 2017-01-24
- The classes tested in this test are:
 - Models.Code.GenericCode
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2018-01-24
 - description: Adding this test description.

2.3.82 FRAMEWORK CODEINTERFACETESTS.CUBITMOOSEINTERFACE

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_CUBIT_MOOSE.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.CubitMooseInterface
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.CubitMooseInterface
```

- Test Description:
 - An example of using the CubitMoose code interface. This test is designed to ensure the CubitMoose interface runs correctly (using the RAVEN alias system as well) It will only run if a cubit executable is found. At this time, the cubit executable directory is specified only for INL HPC machines, thus the test will not run on machines where cubit is not installed in the hpc-common apps local cubit 13.2 bin directory. This will need to change to accomodate variations in the executable’s location across platforms. Two variables are sampled in this test: one boundary condition value and one geometric property (length) that will be sent to the MOOSE input file and Cubit journal file respectively. Variables are sampled in a grid with specified values for each parameter. The test checks for generated exodus meshes and diffs the generated csv with the gold one.
- Original Author:
 - senrs
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - Models.Code.CubitMoose, Models.AliasSystem
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-06

- description: Updating test cases to reflect the changes to the user input.
2. revision info:
 - author : tompjame
 - date : 2016-08-29
 - description: ref #668 Added tests for Bison and relap mammoth interaction, reorganized Mammoth Interface test folder, updated syntax in mammoth and mesh interface tests, added conversion scripts for new cubit and mammoth input file syntax. Ref #668 Updated mammoth interface for additional extensibility and individual entries for input file variables. Ref #668 Had to edit the method of checking correct files in Rattlesnake interface and add more test files for no executable test. Ref #668 Removed whitespace from test inputs. Ref #668 Updated documentation. Ref #668 Removing more whitespace. Ref #668 Edited test files. Ref #668 Removed unnecessary files from test folder for interface.
 3. revision info:
 - author : alfoa
 - date : 2016-12-15
 - description: Closes #769
 4. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.83 FRAMEWORK CODEINTERFACETESTS.BISONANDMESHINTERFACE

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_BISON_and_MESH.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.BisonAndMeshInterface
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.BisonAndMeshInterface
```

- Test Description:
 - An example of using the BisonAndMesh code interface. This test is designed to ensure the BisonAndMesh interface runs correctly. It will only run if a BISON executable is found. At this time, a check is not performed to verify a Cubit executable is found due to variations in the executable’s location across platforms. The cubit bin directory must be on the PYTHONPATH for BISON’s mesh script to run. Four variables are sampled in this test: two material properties (fuel thermal conductivity and cladding thermal conductivity) and two geometric properties (fuel pellet radius and cladding thickness) that will be sent to the BISON input file and Bison Mesh Script input respectively. Variables are sampled in a grid with specified values for each parameter. The test checks for generated exodus files and diffs the generated csv with the gold one.
- Original Author:
 - senrs
- Creation date:
 - 2015-10-06
- The classes tested in this test are:

- Models.Code.BisonAndMesh

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

2. revision info:

- author : tompjame
- date : 2016-08-29
- description: Ref #668 Added tests for Bison and relap mammoth interaction, reorganized Mammoth Interface test folder, updated syntax in mammoth and mesh interface tests, added conversion scripts for new cubit and mammoth input file syntax. Ref #668 Updated mammoth interface for additional extensibility and individual entries for input file variables. Ref #668 Had to edit the method of checking correct files in Rattlesnake interface and add more test files for no executable test. Ref #668 Removed whitespace from test inputs. Ref #668 Updated documentation. Ref #668 Removing more whitespace. Ref #668 Edited test files. Ref #668 Removed unnecessary files from test folder for interface.

3. revision info:

- author : alfoa
- date : 2016-12-15
- description: Closes #769

4. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.84 FRAMEWORK CODEINTERFACETESTS.MOOSEVPPINTERFACE

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_MOOSE_VPP.xml”.

This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MooseVPPInterface
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MooseVPPInterface
```

- Test Description:

- An example of using the MooseBasedApp code interface. This test is designed to ensure the MooseBasedApp interface is able to process vectorial data (sample vectors)

- Original Author:

- senrs

- Creation date:

- 2015-10-06

- The classes tested in this test are:

- Models.Code.MooseBasedApp
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2015-10-09
 - description: Changing batch size in RAVEN test
 2. revision info:
 - author : senrs
 - date : 2015-10-09
 - description: Moved the VPP outfilename as an input parameter
 3. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 4. revision info:
 - author : alfoa
 - date : 2016-12-15
 - description: Closes #769
 5. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.85 FRAMEWORK CODEINTERFACETESTS.MAAP5INTERFACEFORWARDSAMPLING

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_maap5_code_interface_forward.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MAAP5interfaceForwardSampling
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MAAP5interfaceForwardSampling
```

- Test Description:
 - An example of using the the Model Code of type MAAP5, with Forward Sampling (e.g. MonteCarlo)
- Original Author:
 - alfoa
- Creation date:
 - 2016-06-27
- The classes tested in this test are:
 - Models.Code.MAAP5

- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-07-01
 - description: Addressed Dan’s comments on interface (By Claudia Picoco)
 2. revision info:
 - author : alfoa
 - date : 2016-09-01
 - description: Close #650
 3. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: Test updates
 4. revision info:
 - author : talbpaul
 - date : 2016-10-25
 - description: removed dim in OutStreams Plot for validation purposes
 5. revision info:
 - author : alfoa
 - date : 2016-11-15
 - description: Updated input files
 6. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.86 FRAMEWORK CODEINTERFACETESTS.MAAP5INTERFACEDETSAMPLING

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_maap5_code_interface_det.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MAAP5interfaceDETSampling
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MAAP5interfaceDETSampling
```

- Test Description:
 - An example of using the the Model Code of type MAAP5. This test is aimed to test the mechanics of the MAAP5 interface when used with the Dynamic Event Tree methodology.
- Original Author:
 - alfoa
- Creation date:
 - 2016-06-27

- The classes tested in this test are:
 - Models.Code.MAAP5, Samplers.DynamicEventTree
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-07-01
 - description: Addressed Dan’s comments on interface (By Claudia Picoco)
 2. revision info:
 - author : bobk
 - date : 2016-07-07
 - description: Changes file mode on two XML test file from 775 to 664 so that they will not be flagged as modified after validate.xml is run.
 3. revision info:
 - author : alfoa
 - date : 2016-09-01
 - description: Close #650
 4. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: Test updates
 5. revision info:
 - author : talbpaul
 - date : 2016-10-25
 - description: removed dim in OutStream Plot for validation purposes
 6. revision info:
 - author : alfoa
 - date : 2016-11-15
 - description: Updated input files
 7. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.87 FRAMEWORK CODEINTERFACETESTS.MAAP5INTERFACEHYBRIDDETSAMPLING

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_maap5_code_interface_hybrid_det.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MAAP5interfaceHybridDETSampling
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MAAP5interfaceHybridDETSampling
```

- Test Description:

- An example of using the the Model Code of type MAAP5. This test is aimed to test the mechanics of the MAAP5 interface when used with the Dynamic Event Tree (Hybrid Dynamic Event Tree) methodology.
- Original Author:
 - alfoa
- Creation date:
 - 2016-07-01
- The classes tested in this test are:
 - Models.Code.MAAP5, Samplers.DynamicEventTree
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-07-05
 - description: Fixing XSD and user manual to match XSD and code.
 2. revision info:
 - author : alfoa
 - date : 2016-09-01
 - description: Close #650
 3. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: Test updates
 4. revision info:
 - author : talbpaul
 - date : 2016-10-25
 - description: removed dim in OutStream Plot for validation purposes
 5. revision info:
 - author : alfoa
 - date : 2016-11-15
 - description: Updated input files
 6. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.88 FRAMEWORK CODEINTERFACETESTS.MAAP5INTERFACEADETSAMPLING

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_maap5_code_interface_adaptive_det.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MAAP5interfaceADETSampling
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MAAP5interfaceADETSampling
```

- Test Description:
 - An example of using the the Model Code of type MAAP5. This test is aimed to test the mechanics of the MAAP5 interface when used with the Adaptive Dynamic Event Tree methodology.
- Original Author:
 - alfoa
- Creation date:
 - 2016-07-11
- The classes tested in this test are:
 - Models.Code.MAAP5, Samplers.AdaptiveDynamicEventTree
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-07-21
 - description: Fixed XSD
 2. revision info:
 - author : alfoa
 - date : 2016-07-27
 - description: modified xml input tests for MAAP5
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.
 4. revision info:
 - author : maljdan
 - date : 2017-05-03
 - description: Reducing batch size to ensure consistent execution path

2.3.89 FRAMEWORK CODEINTERFACETESTS.MAAP5INTERFACEAHDETSAMPLING

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_maap5_code_interface_adaptive_hybrid_det.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MAAP5interfaceAHDETSampling
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MAAP5interfaceAHDETSampling
```

- Test Description:
 - An example of using the the Model Code of type MAAP5. This test is aimed to test the mechanics of the MAAP5 interface when used with the Adaptive Dynamic Event Tree methodology (Adaptive Hybrid Dynamic Event Tree).

- Original Author:
 - alfoa
- Creation date:
 - 2016-07-11
- The classes tested in this test are:
 - Models.Code.MAAP5, Samplers.AdaptiveDynamicEventTree
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-07-21
 - description: Fixed XSD
 2. revision info:
 - author : alfoa
 - date : 2016-07-27
 - description: Modified xml input tests for MAAP5
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.
 4. revision info:
 - author : maljdan
 - date : 2017-05-03
 - description: Reducing batch size to ensure consistent execution path

2.3.90 FRAMEWORK CODEINTERFACETESTS.MAAP5INTERFACEDETSAMPLINGMULTIBRANCH

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_maap5_code_interface_det_multibranch.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MAAP5interfaceDETSamplingMultiBranch
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MAAP5interfaceDETSamplingMultiBranch
```

- Test Description:
 - An example of using the the Model Code of type MAAP5. This test is aimed to test the mechanics of the MAAP5 interface when used with the Dynamic Event Tree methodology, characterized my a Multi-Branch sampling approach.
- Original Author:
 - alfoa
- Creation date:

– 2016-12-16

- The classes tested in this test are:
 - Models.Code.MAAP5, Samplers.DynamicEventTree
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.91 FRAMEWORK CODEINTERFACETESTS.INSSRELAP5JAPANINTERFACESAMPLING

This test can be found at “./raven/tests/framework/CodeInterfaceTests/test_relap5_code_inss.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.INSSrelap5JapanInterfaceSampling
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.INSSrelap5JapanInterfaceSampling
```

- Test Description:
 - An example of using the RELAP5 code interface (modified version of INSS (Japan)). This test is aimed to test the mechanics of the interface (no executable), that perturbs the RELAP5 input deck and the auxiliary file that the RELAP5 version by INSS reads.
- Original Author:
 - alfoa
- Creation date:
 - 2016-07-21
- The classes tested in this test are:
 - Models.Code.Relap5inssJp
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-10-24
 - description: finalized branch
 2. revision info:
 - author : alfoa
 - date : 2016-10-25
 - description: added xsd
 3. revision info:
 - author : alfoa
 - date : 2016-10-25

- description: ok
4. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.92 FRAMEWORK CODEINTERFACETESTS.MELCORINTERFACEFORWARDSAMPLINGNOEXE

This test can be found at “. /raven/tests/framework/CodeInterfaceTests/test_melcor_interface.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.melcorInterfaceForwardSamplingNoExe
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.melcorInterfaceForwardSamplingNoExe
```

- Test Description:
 - An example of using the Melcor 2.1/2.2 code interface. This test is aimed to test the mechanics of the interface (no executable).
- Original Author:
 - alfoa
- Creation date:
 - 2017-04-27
- The classes tested in this test are:
 - Models.Code.Melcor
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-04-27
 - description: Adding this test description.

2.3.93 FRAMEWORK CODEINTERFACETESTS.RAVENRUNNINGRAVEN

This test can be found at “. /raven/tests/framework/CodeInterfaceTests/test_raven_running_raven_int_models.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.RAVENrunningRAVEN
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.RAVENrunningRAVEN
```

- Test Description:
 - This test is aimed to check the functionality of the RAVEN code interface (RAVEN running RAVEN). It tests the MPI implementation of the SLAVE RAVEN runs. In this case, 3 simultaneous SLAVE RAVEN (batchSize=3) runs are going to be spawned, each of them using 2 processors (NumMPI=2). The NumMPI XML node MUST BE INPUTTED if the SLAVE RAVEN runs must run in multiple processors!

- Original Author:
 - alfoa
- Creation date:
 - 2017-09-16
- The classes tested in this test are:
 - Models.Code.RAVEN

2.3.94 FRAMEWORK CODEINTERFACETESTS INSTANT.TESTINSTANT MC

This test can be found at “./raven/tests/framework/CodeInterfaceTests/Instant/test_mc_instant.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/Instant.testInstant_MC
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/Instant.testInstant_MC
```

- Test Description:
 - An example of using the code interface RattleSnake when the INSTANT solver is employed (non-executable). This test is aimed to check the mechanics of the code interface when a XS library needs to be perturbed (IAEA2D benchmark), with a MonteCarlo sampling strategy
- Original Author:
 - wangc
- Creation date:
 - 2016-05-08
- The classes tested in this test are:
 - Models.Code.Rattlesnake, Sampler.MonteCarlo
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.95 FRAMEWORK CODEINTERFACETESTS INSTANT.TEST DIFFCOEFF

This test can be found at “./raven/tests/framework/CodeInterfaceTests/Instant/test_diffusioncoefficient.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/Instant.test_diffCoeff
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/Instant.test_diffCoeff
```

- Test Description:

- An example of using the code interface RattleSnake when the INSTANT solver is employed. This test is aimed to check the mechanics of the code interface when the diffusion coefficient in the XS library needs to be perturbed.

- Original Author:

- wangc

- Creation date:

- 2016-08-09

- The classes tested in this test are:

- Models.Code.Rattlesnake

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: Test updates

2. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.96 FRAMEWORK CODEINTERFACETESTS INSTANT.TESTINSTANT NOEXEC

This test can be found at “./raven/tests/framework/CodeInterfaceTests/Instant/test_instant_noexec.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/Instant.testInstant_noexec
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/Instant.testInstant_noexec
```

- Test Description:

- An example of using the code interface RattleSnake when the INSTANT solver is employed (noexecutable). This test is aimed to check the mechanics of the code interface when a XS library needs to be perturbed (IAEA2D benchmark).

- Original Author:
 - wangc
- Creation date:
 - 2016-07-14
- The classes tested in this test are:
 - Models.Code.Rattlesnake
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.97 FRAMEWORK CODEINTERFACETESTS RATTLESNAKEINTERFACE.TESTGRIDRATTLESNAKE

This test can be found at “./raven/tests/framework/CodeInterfaceTests/RattlesnakeInterface/test_grid_rattlesnake.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RattlesnakeInterface.testGridRattlesnake
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RattlesnakeInterface.testGridRattl
```

- Test Description:
 - An example of using the code interface RattleSnake when XS need to be perturbed. This test is aimed to check the functionality (running the code) of the Rattlesnake interface when a Grid sampling approach is used.
- Original Author:
 - wangc
- Creation date:
 - 2016-04-21
- The classes tested in this test are:
 - Models.Code.Rattlesnake, Sampler.Grid
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15

- description: Test updates
2. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.98 FRAMEWORK CODEINTERFACETESTS RATTLESNAKEINTERFACE.TESTMC

This test can be found at “./raven/tests/framework/CodeInterfaceTests/RattlesnakeInterface/test_mc_rattlesnake.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RattlesnakeInterface.testMC
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RattlesnakeInterface.testMC
```

- Test Description:

- An example of using the code interface RattleSnake when XS need to be perturbed. This test is aimed to check the functionality (running the code) of the Rattlesnake interface when a MonteCarlo sampling approach is used.

- Original Author:

- wangc

- Creation date:

- 2016-04-21

- The classes tested in this test are:

- Models.Code.Rattlesnake, Sampler.MonteCarlo

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : wangc
- date : 2016-08-04
- description: Modify test to perturb transport XS and regold the tests

2. revision info:

- author : talbpaul
- date : 2016-09-15
- description: Test updates

3. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.99 FRAMEWORK CODEINTERFACETESTS RATTLESNAKEINTERFACE.TESTMCRATTLESNAKE

This test can be found at “./raven/tests/framework/CodeInterfaceTests/RattlesnakeInterface/test_perturb_rattlesnake_only.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RattlesnakeInterface.testMCRattlesnake
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RattlesnakeInterface.testMCRattlesnake
```

- Test Description:
 - An example of using the code interface RattleSnake. This test is aimed to check the functionality (running the code) of the Rattlesnake interface (perturbing only RattleSnake and not the YAK library) when a MonteCarlo sampling approach is used.
- Original Author:
 - wangc
- Creation date:
 - 2016-04-21
- The classes tested in this test are:
 - Models.Code.Rattlesnake, Sampler.MonteCarlo
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.100 FRAMEWORK CODEINTERFACETESTS RATTLESNAKEINTERFACE.TESTMCRYAK

This test can be found at “./raven/tests/framework/CodeInterfaceTests/RattlesnakeInterface/test_perturb_yak_only.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RattlesnakeInterface.testMCRYak
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RattlesnakeInterface.testMCRYak
```

- Test Description:
 - An example of using the code interface RattleSnake when XS need to be perturbed. This test is aimed to check the functionality (running the code) of the Rattlesnake interface (perturbing only YAK library) when a MonteCarlo sampling approach is used.

- Original Author:
 - wangc
- Creation date:
 - 2016-04-21
- The classes tested in this test are:
 - Models.Code.Rattlesnake, Sampler.MonteCarlo
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : wangc
 - date : 2016-08-04
 - description: Modify test to perturb transport XS and regold the tests
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: Test updates
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.101 FRAMEWORK DATAOBJECTS.TEST OUTPUT POINT ATTRIBUTES

This test can be found at “./raven/tests/framework/DataObjects/pointSetAttributes.xml”.
 This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.test_output_point_attributes
```

or

```
./run_framework_tests --re=framework/DataObjects.test_output_point_attributes
```

- Test Description:
 - Test to check the functionalities of DataObjects preprocess the data applying simple operator (e.g. max value, average, min value, etc.), in the *options* XML node. In this case it tests the attributes for PointSet.
- Original Author:
 - alfoa
- Creation date:
 - 2018-02-01
- The classes tested in this test are:
 - DataObjects.PointSet, Models.ExternalModel

2.3.102 FRAMEWORK DATAOBJECTS.TEST OUTPUT ATTRIBUTES

This test can be found at “./raven/tests/framework/DataObjects/historySetAttributes.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.test_output_attributes
```

or

```
./run_framework_tests --re=framework/DataObjects.test_output_attributes
```

- Test Description:
 - Test to check the functionalities of DataObjects preprocess the data applying simple operator (e.g. max value, average, min value, etc.), in the *options* XML node. In this case it tests the attributes for HistorySet.
- Original Author:
 - alfoa
- Creation date:
 - 2018-02-01
- The classes tested in this test are:
 - DataObjects.HistorySet, Models.ExternalModel

2.3.103 FRAMEWORK DATAOBJECTS.TEST OUTPUT FROM DB POINT ATTRIBUTES

This test can be found at “./raven/tests/framework/DataObjects/pointSetFromDBAttributes.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.test_output_from_db_point_attributes
```

or

```
./run_framework_tests --re=framework/DataObjects.test_output_from_db_point_attributes
```

- Test Description:
 - Test to check the functionalities of DataObjects preprocess the data applying simple operator (e.g. max value, average, min value, etc.), in the *options* XML node. In this case it tests the attributes for PointSet coming from a Database.
- Original Author:
 - alfoa
- Creation date:
 - 2018-02-01
- The classes tested in this test are:
 - DataObjects.PointSet, Models.ExternalModel

2.3.104 FRAMEWORK DATAOBJECTS.TEST OUTPUT FROM DB HISTORY ATTRIBUTES

This test can be found at “./raven/tests/framework/DataObjects/historySetFromDBAttributes.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.test_output_from_db_history_attributes
```

or

```
./run_framework_tests --re=framework/DataObjects.test_output_from_db_history_attributes
```

- Test Description:
 - Test to check the functionalities of DataObjects preprocess the data applying simple operator (e.g. max value, average, min value, etc.), in the *options* XML node. In this case it tests the attributes for HistorySet coming from a DataBase.
- Original Author:
 - alfoa
- Creation date:
 - 2018-02-01
- The classes tested in this test are:
 - DataObjects.HistorySet, Models.ExternalModel

2.3.105 FRAMEWORK DATAOBJECTS.DATAOBJECT METADATA

This test can be found at “./raven/tests/framework/DataObjects/test_DataObject_metadata.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.dataObject_metadata
```

or

```
./run_framework_tests --re=framework/DataObjects.dataObject_metadata
```

- Test Description:
 - Test to check the functionalities of DataObjects.PointSet, when metadata need to be dumped out. In this test, the PointProbability generated during the employment of a sampling strategy is dumped in the CSV files, even if it is part of the metadata container.
- Original Author:
 - maljdan
- Creation date:
 - 2016-06-23
- The classes tested in this test are:
 - DataObjects.PointSet
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:

- author : maljdan
- date : 2016-06-23
- description: Moving test case into a specific DataObjects folder

2. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.106 FRAMEWORK DATAOBJECTS.LOAD CSV

This test can be found at “./raven/tests/framework/DataObjects/test_load_csv.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.load_csv
```

or

```
./run_framework_tests --re=framework/DataObjects.load_csv
```

- Test Description:
 - Test to check the functionalities of DataObjects.PointSet to be constructed by an extern input file (csv)
- Original Author:
 - maljdan
- Creation date:
 - 2016-06-23
- The classes tested in this test are:
 - DataObjects.PointSet
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.107 FRAMEWORK DATAOBJECTS.LOAD CSV HISTORY

This test can be found at “./raven/tests/framework/DataObjects/test_load_csv_history.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.load_csv_history
```

or

```
./run_framework_tests --re=framework/DataObjects.load_csv_history
```

- Test Description:
 - Test to check the functionalities of DataObjects.HistorySet to be constructed by an extern input file (csv)

- Original Author:
 - maljdan
- Creation date:
 - 2016-06-23
- The classes tested in this test are:
 - DataObjects.HistorySet
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.108 FRAMEWORK DATAOBJECTS.LOAD TWO CSVS

This test can be found at “./raven/tests/framework/DataObjects/test_load_two_csvs.xml”.
 This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.load_two_csvs
```

or

```
./run_framework_tests --re=framework/DataObjects.load_two_csvs
```

- Test Description:
 - This test verifies that multiple files can be loaded into a single point set without destroying the information from each other.
- Original Author:
 - maljdan
- Creation date:
 - 2017-06-26
- The classes tested in this test are:
 - DataObjects.PointSet

2.3.109 FRAMEWORK DATAOBJECTS.LOAD TWO CSV HISTORIES

This test can be found at “./raven/tests/framework/DataObjects/test_load_two_csv_histories.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.load_two_csv_histories
```

or

```
./run_framework_tests --re=framework/DataObjects.load_two_csv_histories
```

- Test Description:

- This test verifies that multiple csv files can be loaded into a single history set without destroying the information from each other.

- Original Author:

- maljdan

- Creation date:

- 2017-06-26

- The classes tested in this test are:

- DataObjects.HistorySet

2.3.110 FRAMEWORK.DISTRIBUTIONS.CATEGORICAL

This test can be found at “./raven/tests/framework/Distributions/test_distributionsCategorical.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.Distributions.categorical
```

or

```
./run_framework_tests --re=framework.Distributions.categorical
```

- Test Description:

- This test is aimed to test the capability of RAVEN to use 1D Categorical distributions.

- Original Author:

- mandd

- Creation date:

- 2016-11-02

- The classes tested in this test are:

- Distributions.Categorical

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.111 FRAMEWORK.DISTRIBUTIONS.LAPLACE

This test can be found at “./raven/tests/framework/Distributions/test_distributionsLaplace.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.Distributions.laplace
```

or

```
./run_framework_tests --re=framework.Distributions.laplace
```

- Test Description:
 - This test is aimed to test the capability of RAVEN to use 1D Laplace distributions.
- Original Author:
 - coglj
- Creation date:
 - 2017-04-26
- The classes tested in this test are:
 - Distributions.Laplace

2.3.112 FRAMEWORK.DISTRIBUTIONS.GEOMETRIC

This test can be found at “./raven/tests/framework/Distributions/test_distributionsGeometric.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.Distributions.geometric
```

or

```
./run_framework_tests --re=framework.Distributions.geometric
```

- Test Description:
 - This test is aimed to test the capability of RAVEN to use 1D Geometric distribution.
- Original Author:
 - coglj
- Creation date:
 - 2017-04-26
- The classes tested in this test are:
 - Distributions.Geometric

2.3.113 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELLINEARPARALLEL

This test can be found at “./raven/tests/framework/ensembleModelTests/test_ensemble_model_linear_internal_parallel.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelLinearParallel
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelLinearParallel
```

- Test Description:
 - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the functionality of assembling multiple Models, when they result in a single chain of Models (linear system). This test checks the functionality of the model using a multi processor (ParallelPython) parallelization scheme.

- Original Author:
 - alfoa
- Creation date:
 - 2016-04-14
- The classes tested in this test are:
 - Models.EnsembleModel, Models.ExternalModel, JobHandler.ParallelPython
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-04-21
 - description: Modified number of processors
 2. revision info:
 - author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
 3. revision info:
 - author : alfoa
 - date : 2016-09-01
 - description: Close #650
 4. revision info:
 - author : alfoa
 - date : 2016-11-14
 - description: New syntax ensemble
 5. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.114 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELLINEARTHREAD

This test can be found at “./raven/tests/framework/ensembleModelTests/test_ensemble_model_linear_threading.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelLinearThread
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelLinearThread
```

- Test Description:
 - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the functionality of assembling multiple Models, when they result in a single chain of Models (linear system). This test checks the functionality of the model using a multi threading parallelization scheme.

- Original Author:
 - alfoa
- Creation date:
 - 2016-04-14
- The classes tested in this test are:
 - Models.EnsembleModel, Models.ExternalModel, JobHandler.Thread
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
 2. revision info:
 - author : alfoa
 - date : 2016-09-01
 - description: Close #650
 3. revision info:
 - author : alfoa
 - date : 2016-11-14
 - description: New syntax ensemble
 4. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.115 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELLINEARTHREADWITHTIMESERIES

This test can be found at “./raven/tests/framework/ensembleModelTests/test_ensemble_model_linear_threading_with_time_series.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelLinearThreadWithTimeSeries
or
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelLinearThreadWith
```

- Test Description:
 - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the functionality of assembling multiple Models, when they result in a single chain of Models (linear system) and they need to transfer “time series” type of data (vectors). This test checks the functionality of the model using a multi threading parallelization scheme.
- Original Author:
 - alfoa
- Creation date:

- 2016-08-02
- The classes tested in this test are:
 - Models.EnsembleModel, Models.ExternalModel, JobHandler.Thread
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-11-29
 - description: Added test for time series
 2. revision info:
 - author : alfoa
 - date : 2016-12-01
 - description: Fixed order of objects in test inputs in order to respect the XSD schema
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.116 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELNONLINEARPARALLEL

This test can be found at “./raven/tests/framework/ensembleModelTests/test_ensemble_model_picard_parallel.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelNonLinearParallel
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelNonLinearParallel
```

- Test Description:
 - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the functionality of assembling multiple Models, testing the iterative scheme present in RAVEN when the chain of Models turn to be a Non Linear System. This test checks the functionality of the Model with a multi processor (Parallel Python) parallelization scheme.
- Original Author:
 - alfoa
- Creation date:
 - 2016-04-14
- The classes tested in this test are:
 - Models.EnsembleModel, Models.ExternalModel, JobHandler.ParallelPython
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa

- date : 2016-04-21
 - description: Modified number of processors
2. revision info:
 - author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
 3. revision info:
 - author : alfoa
 - date : 2016-09-01
 - description: Close #650
 4. revision info:
 - author : alfoa
 - date : 2016-11-14
 - description: New syntax ensemble
 5. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.117 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELNONLINEARTHREAD

This test can be found at “./raven/tests/framework/ensembleModelTests/test_ensemble_model_picard_thread.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelNonLinearThread
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelNonLinearThread
```

- Test Description:
 - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the functionality of assembling multiple Models, testing the iterative scheme present in RAVEN when the chain of Models turn to be a Non Linear System. This test checks the functionality of the Model with a multi threading parallelization scheme.
- Original Author:
 - alfoa
- Creation date:
 - 2016-04-14
- The classes tested in this test are:
 - Models.EnsembleModel, Models.ExternalModel, JobHandler.Thread
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:

- author : alfoa
 - date : 2016-04-21
 - description: Modified number of processors
2. revision info:
- author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
3. revision info:
- author : alfoa
 - date : 2016-09-01
 - description: Close #650
4. revision info:
- author : alfoa
 - date : 2016-11-14
 - description: New syntax ensemble
5. revision info:
- author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.
6. revision info:
- author : wangc
 - date : 2017-09-11
 - description: add new sub-node 'initialStartModels'

2.3.118 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELWITHCODE

This test can be found at “./raven/tests/framework/ensembleModelTests/test_ensemble_model_linear_threading_with_code.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelWithCode
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelWithCode
```

- Test Description:

- Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models and Codes. This test is aimed to check the functionality of assembling multiple Models, when they result in a single chain of Models (linear system). This test checks the functionality of the model using a multi threading parallelization scheme for the External Models and multi processor scheme for the external Code.

- Original Author:

- alfoa

- Creation date:

- 2016-04-14

- The classes tested in this test are:
 - Models.EnsembleModel, Models.ExternalModel, Models.Code, JobHandler.Thread
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-04-21
 - description: Modified number of processors
 2. revision info:
 - author : alfoa
 - date : 2016-11-14
 - description: New syntax ensemble
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.119 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELLINEARPARALLELWITHOPTIMIZER

This test can be found at “./raven/tests/framework/ensembleModelTests/test_ensemble_model_linear_internal_parallel_with_optimizer.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelLinearParallelWithOptimizer
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelLinearParallelWithOptimizer
```

- Test Description:
 - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the functionality of assembling multiple Models, when they result in a single chain of Models (linear system) and they are sampled with an Optimization scheme. This test checks the functionality of the model using a multi processor (ParallelPython) parallelization scheme.
- Original Author:
 - alfoa
- Creation date:
 - 2016-09-01
- The classes tested in this test are:
 - Models.EnsembleModel, Models.ExternalModel, JobHandler.ParallelPython
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa

- date : 2016-10-20
 - description: Modified XSD and removed dim attribute from all the tests
2. revision info:
 - author : chenj
 - date : 2016-10-31
 - description: Regold parallel EnsembleModel test since change in the optimization algorithm
 3. revision info:
 - author : alfoa
 - date : 2016-11-14
 - description: New syntax ensemble
 4. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.120 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELLATERALINSERTIONS

This test can be found at “./raven/tests/framework/ensembleModelTests/test_ensemble_model_linear_with_multiple_lateral_insertions.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelLateralInsertions
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelLateralInsertions
```

- Test Description:
 - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the functionality of assembling multiple Models, when multiple chains of Models are connected “laterly”.
- Original Author:
 - alfoa
- Creation date:
 - 2016-12-13
- The classes tested in this test are:
 - Models.EnsembleModel, Models.ExternalModel, JobHandler.ParallelPython
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.121 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELWITH2CODESANDALIAS

This test can be found at “./raven/tests/framework/ensembleModelTests/test_ensemble_model_with_2_codes.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelWith2CodesAndAlias  
or
```

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelWith2CodesAndAlias
```

- Test Description:
 - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple multiple Codes together, with same output variable names. This means that the alias system has been used and this test is aimed to show how to use it in these kinds of situations.
- Original Author:
 - alfoa
- Creation date:
 - 2017-02-16
- The classes tested in this test are:
 - Models.Code, JobHandler.Thread

2.3.122 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELWITH2CODESANDALIASANDOPTIONAL

This test can be found at “./raven/tests/framework/ensembleModelTests/test_ensemble_model_2_codes_optional_output.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelWith2CodesAndAliasAndOptional  
or
```

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelWith2CodesAndAliasAndOptional
```

- Test Description:
 - The main goal of this test is to show how to specify optional output in the Ensemble Model object. All the RAVEN available data storage types are tested (DataObjects and Databases).
- Original Author:
 - alfoa
- Creation date:
 - 2017-05-17
- The classes tested in this test are:
 - Models.Code, JobHandler.Thread
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-07-10
 - description: Modified test in order to show how to use a HDF5 as optional output (Issue #237)

2.3.123 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELLINEAREXPECTEDFAILURE

This test can be found at “./raven/tests/framework/ensembleModelTests/test_ensemble_model_linear_expected_failures.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelLinearExpectedFailure
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelLinearExpectedFa
```

- Test Description:
 - Mechanic TEST: This test is aimed to check that the failures from the EnsembleModel are correctly collected without abnormal termination of RAVEN.
- Original Author:
 - alfoa
- Creation date:
 - 2017-09-22
- The classes tested in this test are:
 - Models.EnsembleModel, Models.ExternalModel, JobHandler.Thread

2.3.124 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELFULLYCORRVARS

This test can be found at “./raven/tests/framework/ensembleModelTests/test_ensemble_model_fully_correlated_vars.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelFullyCorrVars
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelFullyCorrVars
```

- Test Description:
 - This test is a mechanical test for the EnsembleModel to test that it can correctly handle fully correlated variables
- Original Author:
 - alfoa
- Creation date:
 - 2017-12-07
- The classes tested in this test are:
 - Models.EnsembleModel, Models.ExternalModel, Models.Code, JobHandler.Thread
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-12-07
 - description: Added the test

2.3.125 FRAMEWORK ERRORCHECKS.MISSINGSTEPS

This test can be found at “./raven/tests/framework/ErrorChecks/test_noSteps.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ErrorChecks.missingSteps
```

or

```
./run_framework_tests --re=framework/ErrorChecks.missingSteps
```

- Test Description:
 - This test is aimed to check the functionality of RAVEN to error out in case some input inconsistencies are found. In this case, the error in case of no Step is tested.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-02-09
- The classes tested in this test are:
 - Steps.MultiRun
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-04-26
 - description: Updated test to accept new “overwrite” attribute in HDF5
 2. revision info:
 - author : alfoa
 - date : 2016-04-27
 - description: New subdirectories structure
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.126 FRAMEWORK ERRORCHECKS.MVNNOTSQUARE

This test can be found at “./raven/tests/framework/ErrorChecks/test_MVN_not_square.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ErrorChecks.MVNnotSquare
```

or

```
./run_framework_tests --re=framework/ErrorChecks.MVNnotSquare
```

- Test Description:

- This test is aimed to check the functionality of RAVEN to error out in case some input inconsistencies are found. In this case, the fact that the MultiVariate distribution errors out when it is not square

- Original Author:

- talbpaul

- Creation date:

- 2016-07-14

- The classes tested in this test are:

- Distributions.MultivariateNormal

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.127 FRAMEWORK ERRORCHECKS.MVNBADDIMS

This test can be found at “./raven/tests/framework/ErrorChecks/test_MVN_bad_dims.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ErrorChecks.MVNbadDims
```

or

```
./run_framework_tests --re=framework/ErrorChecks.MVNbadDims
```

- Test Description:

- This test is aimed to check the functionality of RAVEN to error out in case some input inconsistencies are found. In this case, the fact that the MultiVariate distribution errors out when not all the dimensions of the MultiVariate are used in the sampling strategy.

- Original Author:

- talbpaul

- Creation date:

- 2016-07-14

- The classes tested in this test are:

- Distributions.MultivariateNormal, Samplers.MonteCarlo

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.128 FRAMEWORK HYBRIDMODEL.HYBRIDMODEL

This test can be found at “./raven/tests/framework/hybridModel/test_hybrid_model.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/hybridModel.hybridModel
```

or

```
./run_framework_tests --re=framework/hybridModel.hybridModel
```

- Test Description:
 - Example of usage of the Hybrid Model capability in RAVEN This test is intended to check the functionality of Hybrid Model.
- Original Author:
 - wangc
- Creation date:
 - 2017-09-13
- The classes tested in this test are:
 - Models.HybridModel, Models.ExternalModel, Models.ROM

2.3.129 FRAMEWORK HYBRIDMODEL.ROMTRAIN

This test can be found at “./raven/tests/framework/hybridModel/test_train_rom.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/hybridModel.romTrain
```

or

```
./run_framework_tests --re=framework/hybridModel.romTrain
```

- Test Description:
 - This test is intended to check the rom train capability of the Hybrid Model.
- Original Author:
 - wangc
- Creation date:
 - 2017-09-20
- The classes tested in this test are:
 - Models.HybridModel, Models.ExternalModel, Models.ROM

2.3.130 FRAMEWORK HYBRIDMODEL.RUNCODE

This test can be found at “./raven/tests/framework/hybridModel/test_code.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/hybridModel.runCode
```

or

```
./run_framework_tests --re=framework/hybridModel.runCode
```

- Test Description:
 - This test is aimed to test the HybridModel system with the generic code system.
- Original Author:
 - wangc
- Creation date:
 - 2017-09-21
- The classes tested in this test are:
 - Models.HybridModel, Models.Code.GenericCode

2.3.131 FRAMEWORK HYBRIDMODEL.ROM ROM

This test can be found at “./raven/tests/framework/hybridModel/test_rom_rom.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/hybridModel.rom_rom
```

or

```
./run_framework_tests --re=framework/hybridModel.rom_rom
```

- Test Description:
 - Example of usage of the Hybrid Model capability in RAVEN This test is intended to check the functionality of Hybrid Model. Use ROM to train ROM
- Original Author:
 - wangc
- Creation date:
 - 2017-09-13
- The classes tested in this test are:
 - Models.HybridModel, Models.ROM

2.3.132 FRAMEWORK INTERNALPARALLELTESTS.ROMSCIKIT

This test can be found at “./raven/tests/framework/InternalParallelTests/test_internal_parallel_ROM_scikit.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/InternalParallelTests.ROMscikit
```

or

```
./run_framework_tests --re=framework/InternalParallelTests.ROMscikit
```

- Test Description:
 - This test is aimed to check the functionality of the RAVEN parallelization scheme for Internal Objects. In this case the functionality of the parallelization is tested for the Model ROM of type SKLearn
- Original Author:
 - alfoa
- Creation date:
 - 2015-10-07
- The classes tested in this test are:
 - JobHandler.ParallelPython, Models.ROM.SKLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 2. revision info:
 - author : maljdan
 - date : 2016-04-25
 - description: Fixing the internal parallel tests to use support vector regression and making the step sizes look the same in the cluster and local test cases. This creates a more robust test case since the data points will be floating point values.
 3. revision info:
 - author : maljdan
 - date : 2016-04-25
 - description: Switching to a different regressor that yields more consistent results.
 4. revision info:
 - author : maljdan
 - date : 2016-04-25
 - description: Regolding based on 1-nearest neighbor regression. This should effectively report the same information as the training data.
 5. revision info:
 - author : alfoa
 - date : 2017-01-21

- description: Adding this test description.
6. revision info:
- author : maljdan
 - date : 2017-09-19
 - description: Adding a maxQueueSize for testing a new feature.

2.3.133 FRAMEWORK INTERNALPARALLELTESTS.EXTERNALMODEL

This test can be found at “./raven/tests/framework/InternalParallelTests/test_internal_parallel_extModel.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/InternalParallelTests.ExternalModel
```

or

```
./run_framework_tests --re=framework/InternalParallelTests.ExternalModel
```

- Test Description:
 - This test is aimed to check the functionality of the RAVEN parallelization scheme for Internal Objects. In this case the functionality of the parallelization is tested for the Model External Model
- Original Author:
 - alfoa
- Creation date:
 - 2015-10-07
- The classes tested in this test are:
 - JobHandler.ParallelPython, Models.ExternalModel
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2015-10-19
 - description: New syntax form samplerInit: from sampler_init -> samplerInit
 2. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 3. revision info:
 - author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
 4. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.134 FRAMEWORK INTERNALPARALLELTESTS.POSTPROCESSOR

This test can be found at “./raven/tests/framework/InternalParallelTests/test_internal_parallel_PP_LS.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/InternalParallelTests.PostProcessor
```

or

```
./run_framework_tests --re=framework/InternalParallelTests.PostProcessor
```

- Test Description:
 - This test is aimed to check the functionality of the RAVEN parallelization scheme for Internal Objects. In this case the functionality of the parallelization is tested for the Model PostProcessor
- Original Author:
 - alfoa
- Creation date:
 - 2015-10-07
- The classes tested in this test are:
 - JobHandler.ParallelPython, Models.PostProcessor
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2015-10-07
 - description: Made the test faster
 2. revision info:
 - author : alfoa
 - date : 2015-10-19
 - description: New syntax form samplerInit: from sampler_init ~¿ samplerInit
 3. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 4. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.135 FRAMEWORK OPTIMIZERS.VERBOSE

This test can be found at “./raven/tests/framework/Optimizers/verbose.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Verbose
```

or

```
./run_framework_tests --re=framework/Optimizers.Verbose
```

- Test Description:
 - This tests the output of preset verbosity options (`_stepSize`, etc) for optimizer runs.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-06-01
- The classes tested in this test are:
 - Optimizer

2.3.136 FRAMEWORK OPTIMIZERS.MAX

This test can be found at “./raven/tests/framework/Optimizers/infinite.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Max
```

or

```
./run_framework_tests --re=framework/Optimizers.Max
```

- Test Description:
 - This test runs the optimization on $1/x$, returning “inf” at $x=0$. It primarily tests that gradients can be obtained when infinite solutions are provided.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-06-13
- The classes tested in this test are:
 - Optimizer

2.3.137 FRAMEWORK OPTIMIZERS.MULTITRAJLEVELBEALE

This test can be found at “./raven/tests/framework/Optimizers/multilevel_with_multitraj.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.multitrajlevelBeale
```

or

```
./run_framework_tests --re=framework/Optimizers.multitrajlevelBeale
```

- Test Description:
 - This test runs the multilevel optimization with multiple trajectories on Beale’s function. It tests analytic optimization values as well as the mechanical operation of the test, using both multilevel and multitrajectory.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-06-02
- The classes tested in this test are:
 - Optimizer

2.3.138 FRAMEWORK OPTIMIZERS.MULTITRAJLEVELWITHMODELHOLDING

This test can be found at “./raven/tests/framework/Optimizers/multilevel_with_multitraj_ensemble.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.multitrajlevelWithModelHolding
```

or

```
./run_framework_tests --re=framework/Optimizers.multitrajlevelWithModelHolding
```

- Test Description:
 - This test runs the multilevel optimization with multiple trajectories on Beale’s function and an amplifier (EnsembleModel) It tests the possibility to block some models (Beale) in the optimization process when multilevel optimization is performed.
- Original Author:
 - alfoa
- Creation date:
 - 2017-07-26
- The classes tested in this test are:
 - Optimizer

2.3.139 FRAMEWORK OPTIMIZERS.ROSENBROCKWITHSAMPLERERROR

This test can be found at “./raven/tests/framework/Optimizers/rosenbrock_with_sampler_expected_error.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.RosenbrockWithSamplerError
```

or

```
./run_framework_tests --re=framework/Optimizers.RosenbrockWithSamplerError
```

- Test Description:
 - This test is aimed to check if the errors using a Initialization Sampler are handled.
- Original Author:
 - alfoa
- Creation date:
 - 2017-08-29
- The classes tested in this test are:
 - Optimizer

2.3.140 FRAMEWORK OPTIMIZERS.BEALEFAILUREREJECTION

This test can be found at “./raven/tests/framework/Optimizers/beale_failure_and_rejection.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.BealeFailureRejection
```

or

```
./run_framework_tests --re=framework/Optimizers.BealeFailureRejection
```

- Test Description:
 - This test is aimed to test the ability of the Optimizer to handle failed runs, rejecting the point and cutting the learning rate
- Original Author:
 - alfoa
- Creation date:
 - 2017-09-25
- The classes tested in this test are:
 - Optimizer

2.3.141 FRAMEWORK OUTSTREAMS.IMAGE GENERATION TEXT

This test can be found at “./raven/tests/framework/OutStreams/imageGeneration_ps.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/OutStreams.image_generation_text
```

or

```
./run_framework_tests --re=framework/OutStreams.image_generation_text
```

- Test Description:
 - Test to check the functionalities of OutStreams system in RAVEN of type Plot. This test is aimed to check the capability of RAVEN to create a scatter Plot in PostScript format.
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-27
- The classes tested in this test are:
 - OutStreams.Plot
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: Test updates
 2. revision info:
 - author : alfoa
 - date : 2016-10-20
 - description: Modified XSD and removed dim attribute from all the tests
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.142 FRAMEWORK.IMAGE GENERATION RAW

This test can be found at “./raven/tests/framework/OutStreams/testImageGeneration.py”. This test can be called executing the following command:

```
./run_tests --re=framework.image_generation_raw
```

or

```
./run_framework_tests --re=framework.image_generation_raw
```

- Test Description:

- This test the online generation of plots (colorbar plot). It can not be considered part of the active code but of the regression test system.

This test will use ImageMagick's "compare" utility in order to determine if two image files are within some amount of tolerance. This script operates by executing raven on the input file and then using compare to determine if the gold file and the generated file are near identical. If they are near enough to identical this test will report a "pass," otherwise it will return a "fail."

- Original Author:

- maljdan

- Creation date:

- 2016-04-27

- The classes tested in this test are:

-

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2016-05-04
- description: Fixing the test for the compare executable to test the gold image against itself, if this returns a non-zero code, then the version of imageMagick cannot be used to get a valid difference. Also, I am removing the difference image and instead doing null: to remove the output file when using compare.

2. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.143 FRAMEWORK OUTSTREAMS.INTERACTIVE PLOTTING

This test can be found at `./raven/tests/framework/OutStreams/interactivePlot.xml`. This test can be called executing the following command:

```
./run_tests --re=framework/OutStreams.interactive_plotting
```

or

```
./run_framework_tests --re=framework/OutStreams.interactive_plotting
```

- Test Description:

- Test to check the functionalities of OutStreams system in RAVEN of type Plot. This test is aimed to check the capability of RAVEN to create a Plot and visualize it on the screen (interactively)

- Original Author:

- maljdan

- Creation date:

- 2016-06-30

- The classes tested in this test are:
 - OutStreams.Plot
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-09-01
 - description: Close #650
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: Test updates
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.144 FRAMEWORK OUTSTREAMS.INVALIDINTERPOLATION

This test can be found at “./raven/tests/framework/OutStreams/invalidInterpolation.xml”.
 This test can be called executing the following command:

```
./run_tests --re=framework/OutStreams.invalidInterpolation
```

or

```
./run_framework_tests --re=framework/OutStreams.invalidInterpolation
```

- Test Description:
 - This test was added to detect a defect in the plotting of something like a contour/surface/pcolor/wireframe where it is not well-defined when a single point is used. See #832
- Original Author:
 - maljdan
- Creation date:
 - 2017-03-22
- The classes tested in this test are:
 - OutStreams.Plot

2.3.145 FRAMEWORK OUTSTREAMS.TEST SUBPLOT

This test can be found at “./raven/tests/framework/OutStreams/test_subPlot.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/OutStreams.test_subPlot
```

or

```
./run_framework_tests --re=framework/OutStreams.test_subPlot
```

- Test Description:
 - Test to check the functionalities of OutStreams system in RAVEN to Plot out the information contained in DataObjects, determining in a sub plotting layout (multiple plots side by side in the same figure)
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-26
- The classes tested in this test are:
 - OutStreams.Plot
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-05-20
 - description: Updating the test cases to remove references to Point or History.
 2. revision info:
 - author : alfoa
 - date : 2016-09-01
 - description: Close #650
 3. revision info:
 - author : alfoa
 - date : 2016-10-20
 - description: Modified XSD and removed dim attribute from all the tests
 4. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.146 FRAMEWORK OUTSTREAMS.IO ROM PICKLE

This test can be found at “./raven/tests/framework/OutStreams/test_io_ROM_pickle.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/OutStreams.io_ROM_pickle
```

or

```
./run_framework_tests --re=framework/OutStreams.io_ROM_pickle
```

- Test Description:
 - Test to check the functionalities of OutStreams system in RAVEN to Print out the information contained in DataObjects. In addition, it checks the capability of RAVEN to construct a ROM from a pickle file.
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-26
- The classes tested in this test are:
 - Models.ROM, DataObjects.PointSet, DataObjects.HistorySet, OutStreams.Print
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.147 FRAMEWORK PCA ADAPTIVE SGC TEST ADAPTIVE SGC PCA ANALYTIC

This test can be found at “./raven/tests/framework/pca_adaptive_sgc/test_adaptive_sgc_pca_analytic.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_pca_analytic
```

or

```
./run_framework_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_pca_analytic
```

- Test Description:
 - Tests use of the PCA method for adaptive sparse grids on polynomial models.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-30
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers.AdaptiveSparseGrid, SupervisedLearning.GaussPolynomialROM

2.3.148 FRAMEWORK PCA ADAPTIVE SGC TEST ADAPTIVE SGC ATTENU CORRELATION

This test can be found at “./raven/tests/framework/pca_adaptive_sgc/test_adaptive_sgc_attenu_correlation.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_attenu_correlation
```

or

```
./run_framework_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_attenu_correlation
```

- Test Description:
 - Tests use of the PCA method for adaptive sparse grids on exponential decay models with nonzero covariance.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-30
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers.AdaptiveSparseGrid, SupervisedLearning.GaussPolynomialROM

2.3.149 FRAMEWORK PCA GRID GRIDPCAVALUE

This test can be found at “./raven/tests/framework/pca_grid/test_grid_pca_value.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/gridPCAValue
```

or

```
./run_framework_tests --re=framework/pca_grid/gridPCAValue
```

- Test Description:
 - Tests the value-generated Grid sampler combined with input reductions via PCA method, using multivariate normal distributions.
- Original Author:
 - wangc
- Creation date:
 - 2015-10-28
- The classes tested in this test are:
 - Samplers.Grid

2.3.150 FRAMEWORK PCA GRID GRIDPCACDF

This test can be found at “./raven/tests/framework/pca_grid/test_grid_pca_cdf.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/gridPCACdf
```

or

```
./run_framework_tests --re=framework/pca_grid/gridPCACdf
```

- Test Description:
 - Tests the CDF-generated Grid sampler combined with input reductions via PCA method, using multivariate normal distributions.
- Original Author:
 - wangc
- Creation date:
 - 2015-10-28
- The classes tested in this test are:
 - Samplers.Grid

2.3.151 FRAMEWORK PCA GRID MCPA

This test can be found at “./raven/tests/framework/pca_grid/test_mc_pca.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/mcPCA
```

or

```
./run_framework_tests --re=framework/pca_grid/mcPCA
```

- Test Description:
 - Tests the MonteCarlo sampler combined with input reductions via PCA method, using multivariate normal distributions.
- Original Author:
 - wangc
- Creation date:
 - 2015-10-28
- The classes tested in this test are:
 - Samplers.MonteCarlo

2.3.152 FRAMEWORK PCA LHS LHSVALUE

This test can be found at “./raven/tests/framework/pca_LHS/test_LHS_pca_value.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/LHSValue
```

or

```
./run_framework_tests --re=framework/pca_LHS/LHSValue
```

- Test Description:
 - Tests use of the PCA method to sample in LHS surrogate input space, with grid constructed by value.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-18
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers.Stratified, PostProcessors.BasicStatistics

2.3.153 FRAMEWORK PCA LHS LHSCDF

This test can be found at “./raven/tests/framework/pca_LHS/test_LHS_pca_cdf.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/LHSCdf
```

or

```
./run_framework_tests --re=framework/pca_LHS/LHSCdf
```

- Test Description:
 - Tests use of the PCA method to sample in LHS surrogate input space, with grid constructed via CDF.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-18
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers.Stratified, PostProcessors.BasicStatistics

2.3.154 FRAMEWORK PCA LHS STRATIFIEDVALUE

This test can be found at “./raven/tests/framework/pca_LHS/test_stratified_pca_value.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/stratifiedValue
```

or

```
./run_framework_tests --re=framework/pca_LHS/stratifiedValue
```

- Test Description:
 - Tests use of the PCA method to sample in LHS surrogate input space with grid by value.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-18
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers.Stratified

2.3.155 FRAMEWORK PCA LHS STRATIFIEDCDF

This test can be found at “./raven/tests/framework/pca_LHS/test_stratified_pca_cdf.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/stratifiedCdf
```

or

```
./run_framework_tests --re=framework/pca_LHS/stratifiedCdf
```

- Test Description:
 - Tests use of the PCA method to sample in LHS surrogate input space with grid by CDF.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-18
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers.Stratified

2.3.156 FRAMEWORK PCA LHS LHS

This test can be found at “./raven/tests/framework/pca_LHS/test_LHS.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/LHS
```

or

```
./run_framework_tests --re=framework/pca_LHS/LHS
```

- Test Description:
 - Tests use of the PCA method to sample in LHS surrogate input space.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-18
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers.Stratified, PostProcessors.BasicStatistics

2.3.157 FRAMEWORK PCA LHS LHSCORRELATED

This test can be found at “./raven/tests/framework/pca_LHS/test_LHS_correlated_cdf.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/LHSCorrelated
```

or

```
./run_framework_tests --re=framework/pca_LHS/LHSCorrelated
```

- Test Description:
 - Tests use of the PCA method to sample in LHS surrogate input space. The distributions are a multivariate normal.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-18
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers.Stratified, PostProcessors.BasicStatistics

2.3.158 FRAMEWORK PCA LHS LHSUNCORRELATED

This test can be found at “. /raven/tests/framework/pca_LHS/test_LHS_uncorrelated_cdf.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/LHSUncorrelated
```

or

```
./run_framework_tests --re=framework/pca_LHS/LHSUncorrelated
```

- Test Description:
 - Benchmark for test of the PCA method to sample in LHS surrogate input space.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-18
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers.Stratified, PostProcessors.BasicStatistics

2.3.159 FRAMEWORK PCA GRID IMPORTANCERANKABSCOV

This test can be found at “. /raven/tests/framework/pca_postprocessor/test_postprocessor.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/importanceRankAbsCov
```

or

```
./run_framework_tests --re=framework/pca_grid/importanceRankAbsCov
```

- Test Description:
 - Tests the ImportanceRank postprocessor based on MVN distribution with absolute covariance matrix.
- Original Author:
 - wangc
- Creation date:
 - 2016-03-15
- The classes tested in this test are:
 - PostProcessors.ImportanceRank

2.3.160 FRAMEWORK PCA GRID IMPORTANCERANKRELCOV

This test can be found at “./raven/tests/framework/pca_postprocessor/test_postprocessor_rel.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/importanceRankRelCov
```

or

```
./run_framework_tests --re=framework/pca_grid/importanceRankRelCov
```

- Test Description:
 - Tests the ImportanceRank postprocessor based on MVN distribution with relative covariance matrix.
- Original Author:
 - wangc
- Creation date:
 - 2016-03-15
- The classes tested in this test are:
 - PostProcessors.ImportanceRank

2.3.161 FRAMEWORK PCA GRID TRANSFORMATIONMATRIX

This test can be found at “./raven/tests/framework/pca_postprocessor/test_transformation.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/transformationMatrix
```

or

```
./run_framework_tests --re=framework/pca_grid/transformationMatrix
```

- Test Description:
 - Tests the ImportanceRank postprocessor to output transformation and inverse transformation matrices.
- Original Author:
 - wangc
- Creation date:
 - 2016-07-15
- The classes tested in this test are:
 - PostProcessors.ImportanceRank

2.3.162 FRAMEWORK PCA GRID TIMEDEPIMPORTANCERANK

This test can be found at “./raven/tests/framework/pca_postprocessor/test_time_dependent.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/timeDepImportanceRank
```

or

```
./run_framework_tests --re=framework/pca_grid/timeDepImportanceRank
```

- Test Description:
 - Tests the ImportanceRank postprocessor for time-dependent problems.
- Original Author:
 - wangc
- Creation date:
 - 2016-03-15
- The classes tested in this test are:
 - PostProcessors.ImportanceRank

2.3.163 FRAMEWORK PCA ROM INPUTPCAREDUCTION

This test can be found at “./raven/tests/framework/pca_rom/test_input_pca.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_rom/inputPCAReduction
```

or

```
./run_framework_tests --re=framework/pca_rom/inputPCAReduction
```

- Test Description:
 - Tests capability of PCA input reduction.
- Original Author:
 - wangc
- Creation date:
 - 2015-09-14
- The classes tested in this test are:
 - Distributions.MultivariateNormal

2.3.164 FRAMEWORK PCA ROM MVNABS

This test can be found at “./raven/tests/framework/pca_rom/test_MVN_abs.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_rom/MVNAbs
```

or

```
./run_framework_tests --re=framework/pca_rom/MVNAbs
```

- Test Description:
 - Tests MVN with absolute covariance matrix
- Original Author:
 - wangc
- Creation date:
 - 2015-09-14
- The classes tested in this test are:
 - Distributions.MultivariateNormal

2.3.165 FRAMEWORK PCA ROM MVNREL

This test can be found at “./raven/tests/framework/pca_rom/test_MVN_rel.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_rom/MVNRel
```

or

```
./run_framework_tests --re=framework/pca_rom/MVNRel
```

- Test Description:
 - Tests MVN with relative covariance matrix
- Original Author:
 - wangc
- Creation date:
 - 2015-09-14
- The classes tested in this test are:
 - Distributions.MultivariateNormal

2.3.166 FRAMEWORK PCA ROM ROM

This test can be found at “./raven/tests/framework/pca_rom/test_rom.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_rom/ROM
```

or

```
./run_framework_tests --re=framework/pca_rom/ROM
```

- Test Description:
 - Tests a high-input-dimensionality case to demonstrate input reduction.
- Original Author:
 - wangc
- Creation date:
 - 2015-09-14
- The classes tested in this test are:
 - Distributions.MultivariateNormal

2.3.167 FRAMEWORK PCA ROM ONEDIM

This test can be found at “./raven/tests/framework/pca_rom/test_one_dim_pca.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_rom/oneDim
```

or

```
./run_framework_tests --re=framework/pca_rom/oneDim
```

- Test Description:
 - Tests fix for Issue #389 where the code errored when the problem is reduced to 1 dimension.
- Original Author:
 - wangc
- Creation date:
 - 2015-09-14
- The classes tested in this test are:
 - Distributions.MultivariateNormal

2.3.168 FRAMEWORK PCA SPARSEGRID NORMAL

This test can be found at “./raven/tests/framework/pca_sparseGridCollocation/test_scgpc_normal.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/normal
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/normal
```

- Test Description:
 - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using correlated multivariate normal distributions. Uses distributions with nonzero means.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-23
- The classes tested in this test are:
 - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.3.169 FRAMEWORK PCA SPARSEGRID MVNUNCORRELATED

This test can be found at “./raven/tests/framework/pca_sparseGridCollocation/test_scgpc_uncorrelatedMVN.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/MVNUncorrelated
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/MVNUncorrelated
```

- Test Description:
 - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using uncorrelated multivariate normal distributions.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-23
- The classes tested in this test are:
 - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.3.170 FRAMEWORK PCA SPARSEGRID MVNCORRELATED

This test can be found at “./raven/tests/framework/pca_sparseGridCollocation/test_scgpc_correlatedMVN.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/MVNCorrelated
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/MVNCorrelated
```

- Test Description:
 - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using correlated multivariate normal distributions.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-23
- The classes tested in this test are:
 - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.3.171 FRAMEWORK PCA SPARSEGRID ATTENUATIONTEST

This test can be found at “./raven/tests/framework/pca_sparseGridCollocation/test_attenuation.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/attenuationTest
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/attenuationTest
```

- Test Description:
 - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using uncorrelated multivariate normal distributions.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-23
- The classes tested in this test are:
 - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.3.172 FRAMEWORK PCASAMPLER PCAINDEX

This test can be found at “./raven/tests/framework/pcaSampler/test_pca_index.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pcaSampler/pcaIndex
```

or

```
./run_framework_tests --re=framework/pcaSampler/pcaIndex
```

- Test Description:
 - Tests use of the PCA method to sample in surrogate input space.
- Original Author:
 - wangc
- Creation date:
 - 2016-02-16
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers

2.3.173 FRAMEWORK PCASAMPLER MULTIPCA

This test can be found at “./raven/tests/framework/pcaSampler/test_multi_pca.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pcaSampler/multiPCA
```

or

```
./run_framework_tests --re=framework/pcaSampler/multiPCA
```

- Test Description:
 - Tests use of multiple PCA surrogates in one sampling scheme.
- Original Author:
 - wangc
- Creation date:
 - 2016-02-16
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers.MonteCarlo

2.3.174 FRAMEWORK PCASAMPLER GRIDPCA

This test can be found at “./raven/tests/framework/pcaSampler/test_pca_index_grid.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/pcaSampler/gridPCA
```

or

```
./run_framework_tests --re=framework/pcaSampler/gridPCA
```

- Test Description:
 - Tests use of the PCA method to sample in gridded surrogate input space.
- Original Author:
 - wangc
- Creation date:
 - 2016-02-16
- The classes tested in this test are:
 - Distributions.MultivariateNormal, Samplers.Grid

2.3.175 FRAMEWORK POSTPROCESSORS BASICSTATISTICS GRID ANALYTIC

This test can be found at “./raven/tests/framework/PostProcessors/BasicStatistics/grid_analytic.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/grid_analytic
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/grid_analytic
```

- Test Description:
 - This test checks all the basic statistics on analytic values using a grid sampling; however, the analytic models are not yet documented.
- Original Author:
 - alfoa
- Creation date:
 - 2015-11-21
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.176 FRAMEWORK POSTPROCESSORS BASICSTATISTICS GRID INVALUE

This test can be found at “./raven/tests/framework/PostProcessors/BasicStatistics/grid_inValue.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/grid_inValue
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/grid_inValue
```

- Test Description:
 - This test checks many basic statistics using a grid sampling.
- Original Author:
 - alfoa
- Creation date:
 - 2015-12-16
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.177 FRAMEWORK POSTPROCESSORS BASICSTATISTICS MC

This test can be found at “./raven/tests/framework/PostProcessors/BasicStatistics/mc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/mc
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/mc
```

- Test Description:
 - This test checks basic statistics on Monte Carlo samples.
- Original Author:
 - alfoa
- Creation date:
 - 2015-11-18
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.178 FRAMEWORK POSTPROCESSORS BASICSTATISTICS.MCFLOATPERCENTILE

This test can be found at “./raven/tests/framework/PostProcessors/BasicStatistics/mc_float_percentile.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics.mcFloatPercentile
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics.mcFloatPercentile
```

- Test Description:
 - This test checks basic statistics on Monte Carlo samples, requesting percentiles less than 1 percent
- Original Author:
 - alfoa
- Creation date:
 - 2017-03-26
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.179 FRAMEWORK POSTPROCESSORS BASICSTATISTICS GRID ANALYTIC

This test can be found at “./raven/tests/framework/PostProcessors/BasicStatistics/stratified_analytic.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/grid_analytic
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/grid_analytic
```

- Test Description:
 - This test checks basic statistics on Stratified samples
- Original Author:
 - alfoa
- Creation date:
 - 2015-11-22
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.180 FRAMEWORK POSTPROCESSORS BASICSTATISTICS FACTORIAL ANALYTIC

This test can be found at “./raven/tests/framework/PostProcessors/BasicStatistics/factorial_analytic.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/factorial_analytic
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/factorial_analytic
```

- Test Description:
 - This test checks basic statistics on Factorial samples.
- Original Author:
 - alfoa
- Creation date:
 - 2015-11-22
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.181 FRAMEWORK POSTPROCESSORS BASICSTATISTICS RESPONSESURFACEDOE ANALYTIC

This test can be found at “./raven/tests/framework/PostProcessors/BasicStatistics/responseSurfaceDoE_analytic.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/responseSurfaceDoE_analytic
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/responseSurfaceDoE_analytic
```

- Test Description:
 - This test checks the basic statistics on Response Surface Design of Experiment samples
- Original Author:
 - alfoa
- Creation date:
 - 2015-11-22
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.182 FRAMEWORK POSTPROCESSORS BASICSTATISTICS PRINTXML

This test can be found at “. /raven/tests/framework/PostProcessors/BasicStatistics/print_xml.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/printXml
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/printXml
```

- Test Description:
 - This test checks the ability of the basic statistics PP to print RAVEN XML outputs.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-05-10
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.183 FRAMEWORK POSTPROCESSORS BASICSTATISTICS SENSITIVITY

This test can be found at “. /raven/tests/framework/PostProcessors/BasicStatistics/sensitivity.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/sensitivity
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/sensitivity
```

- Test Description:
 - This test checks the sensitivities (and other metrics) calculated by basic statistics PP
- Original Author:
 - wangc
- Creation date:
 - 2015-12-10
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.184 FRAMEWORK POSTPROCESSORS BASICSTATISTICS.SENSITIVITYONLY

This test can be found at “./raven/tests/framework/PostProcessors/BasicStatistics/sensitivity_only.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics.sensitivityOnly
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics.sensitivityOnly
```

- Test Description:
 - This test checks the sensitivities only calculated by basic statistics PP
- Original Author:
 - alfoa
- Creation date:
 - 2017-07-18
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.185 FRAMEWORK POSTPROCESSORS BASICSTATISTICS TIMEDEPENDENT

This test can be found at “./raven/tests/framework/PostProcessors/BasicStatistics/time_dep.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/timeDependent
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/timeDependent
```

- Test Description:
 - This tests time-dependent basic statistics.
- Original Author:
 - alfoa
- Creation date:
 - 2016-06-20
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.186 FRAMEWORK POSTPROCESSORS BASICSTATISTICS TIMEDEPENDENTASYNCHISTORIES

This test can be found at “./raven/tests/framework/PostProcessors/BasicStatistics/time_dep_asyncHists.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/timeDependentAsyncHistories
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/timeDependentAsyncHistories
```

- Test Description:
 - This test checks time-dependent basic statistics with histories that are not synchronized a priori.
- Original Author:
 - alfoa
- Creation date:
 - 2016-06-21
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.187 FRAMEWORK POSTPROCESSORS BASICSTATISTICS VARIATIONCOEFFICIENT

This test can be found at “./raven/tests/framework/PostProcessors/BasicStatistics/variationCoefficient.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/variationCoefficient
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/variationCoefficient
```

- Test Description:
 - This test is used to test the defect mentioned in issue #666 This test will make sure the expectedValue and the variationCoefficient are correctly computed. If the expectedValues are zero, the variationCoefficient will be INF.
- Original Author:
 - wangc
- Creation date:
 - 2015-11-21
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.188 FRAMEWORK POSTPROCESSORS BASICSTATISTICS MC UNIFORM

This test can be found at “. /raven/tests/framework/PostProcessors/BasicStatistics/mcUnif.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/mc_uniform
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/mc_uniform
```

- Test Description:
 - Tests basic statistics on uniformly-sampled normally-distributed Monte Carlo sampling.
- Original Author:
 - mandd
- Creation date:
 - 2016-11-28
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.189 FRAMEWORK POSTPROCESSORS BASICSTATISTICS WRITEHEAVYXML

This test can be found at “. /raven/tests/framework/PostProcessors/BasicStatistics/heavy_xml_write.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/writeHeavyXml
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/writeHeavyXml
```

- Test Description:
 - This tests time-dependent basic statistics writing a large number of entries to ensure good speed.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-03-16
- The classes tested in this test are:
 - PostProcessors.BasicStatistics,Files.DynamicXMLOutput

2.3.190 FRAMEWORK POSTPROCESSORS METRIC TEST CROSS VALIDATION

This test can be found at “./raven/tests/framework/PostProcessors/CrossValidations/test_cross_validation.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_cross_validation
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_cross_validation
```

- Test Description:
 - This test checks the CrossValidation PostProcessor with KFold method
- Original Author:
 - wangc
- Creation date:
 - 2017-09-06
- The classes tested in this test are:
 - PostProcessors.CrossValidation

2.3.191 FRAMEWORK POSTPROCESSORS METRIC TEST LABELKFOLD

This test can be found at “./raven/tests/framework/PostProcessors/CrossValidations/test_LabelKFold.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_LabelKFold
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_LabelKFold
```

- Test Description:
 - This test checks the CrossValidation PostProcessor with LabelKFold method
- Original Author:
 - wangc
- Creation date:
 - 2017-09-07
- The classes tested in this test are:
 - PostProcessors.CrossValidation

2.3.192 FRAMEWORK POSTPROCESSORS METRIC TEST LEAVEONEOUT

This test can be found at “./raven/tests/framework/PostProcessors/CrossValidations/test_labelShuffleSplit.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_leaveOneOut
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_leaveOneOut
```

- Test Description:
 - This test checks the CrossValidation PostProcessor with LabelShuffleSplit method
- Original Author:
 - wangc
- Creation date:
 - 2017-09-07
- The classes tested in this test are:
 - PostProcessors.CrossValidation

2.3.193 FRAMEWORK POSTPROCESSORS METRIC TEST LEAVEONEOUT

This test can be found at “./raven/tests/framework/PostProcessors/CrossValidations/test_leaveOneOut.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_leaveOneOut
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_leaveOneOut
```

- Test Description:
 - This test checks the CrossValidation PostProcessor with leaveOneOut method
- Original Author:
 - wangc
- Creation date:
 - 2017-09-07
- The classes tested in this test are:
 - PostProcessors.CrossValidation

2.3.194 FRAMEWORK POSTPROCESSORS METRIC TEST LEAVEPLABELOUT

This test can be found at “./raven/tests/framework/PostProcessors/CrossValidations/test_leavePLabelOut.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_leavePLabelOut
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_leavePLabelOut
```

- Test Description:
 - This test checks the CrossValidation PostProcessor with LeavePLabelOut method
- Original Author:
 - wangc
- Creation date:
 - 2017-09-07
- The classes tested in this test are:
 - PostProcessors.CrossValidation

2.3.195 FRAMEWORK POSTPROCESSORS METRIC TEST LEAVEPOUT

This test can be found at “./raven/tests/framework/PostProcessors/CrossValidations/test_leavePOut.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_leavePOut
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_leavePOut
```

- Test Description:
 - This test checks the CrossValidation PostProcessor with leavePOut method
- Original Author:
 - wangc
- Creation date:
 - 2017-09-07
- The classes tested in this test are:
 - PostProcessors.CrossValidation

2.3.196 FRAMEWORK POSTPROCESSORS METRIC TEST SHUFFLESPLIT

This test can be found at “./raven/tests/framework/PostProcessors/CrossValidations/test_shuffleSplit.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_shuffleSplit
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_shuffleSplit
```

- Test Description:
 - This test checks the CrossValidation PostProcessor with shuffle and split method
- Original Author:
 - wangc
- Creation date:
 - 2017-09-07
- The classes tested in this test are:
 - PostProcessors.CrossValidation

2.3.197 FRAMEWORK POSTPROCESSORS METRIC TEST STRATIFIEDKFOLD

This test can be found at “./raven/tests/framework/PostProcessors/CrossValidations/test_stratifiedKFold.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_stratifiedKFold
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_stratifiedKFold
```

- Test Description:
 - This test checks the CrossValidation PostProcessor with Stratified K-Folds method
- Original Author:
 - wangc
- Creation date:
 - 2017-09-07
- The classes tested in this test are:
 - PostProcessors.CrossValidation

2.3.198 FRAMEWORK POSTPROCESSORS METRIC TEST STRATIFIEDSHUFFLESPLIT

This test can be found at “./raven/tests/framework/PostProcessors/CrossValidations/test_stratifiedShuffleSplit.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_stratifiedShuffleSplit
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_stratifiedShuffleSplit
```

- Test Description:
 - This test checks the CrossValidation PostProcessor with StratifiedShuffleSplit method
- Original Author:
 - wangc
- Creation date:
 - 2017-09-07
- The classes tested in this test are:
 - PostProcessors.CrossValidation

2.3.199 FRAMEWORK POSTPROCESSORS METRIC TEST LEAVEONELABELOUT

This test can be found at “./raven/tests/framework/PostProcessors/CrossValidations/test_leaveOneLabelOut.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_leaveOneLabelOut
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_leaveOneLabelOut
```

- Test Description:
 - This test checks the CrossValidation PostProcessor with LeaveOneLabelOut method
- Original Author:
 - wangc
- Creation date:
 - 2017-09-07
- The classes tested in this test are:
 - PostProcessors.CrossValidation

2.3.200 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING KMEANS

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_dataMiningKMeans.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/KMeans
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/KM
```

- Test Description:
 - Tests clustering with the KMeans model.
- Original Author:
 - maljdan
- Creation date:
 - 2016-09-09
- The classes tested in this test are:
 - DataMining

2.3.201 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING KMEANSPCA

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_dataMiningKMeansPCA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/KMeansPCA
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/KM
```

- Test Description:
 - Tests clustering with KMeans followed by data reduction with PCA.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.202 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING MINIBATCHKMEANS

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_dataMiningMiniBatchKMeans.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/MiniBatchKMe
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/Mi
```

- Test Description:
 - Tests clustering with the MiniBatchKMeans model.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.203 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING MEANSHIFT

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_dataMiningMeanShift.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/MeanShift
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/Me
```

- Test Description:
 - Tests clustering with the MeanShift model.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.204 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING AFFINITYPROPAGATION

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_dataMiningAffinityPropogation.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/AffinityProp
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/Af
```

- Test Description:
 - Tests clustering with the AffinityPropogation model.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.205 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING DBSCAN

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_dataMiningDBSCAN.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/DBSCAN
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/DBS
```

- Test Description:
 - Tests clustering with the DBSCAN model.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.206 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING SPECTRAL-CLUSTERING

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_dataMiningSpectralClustering.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/SpectralClus
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/Sp
```

- Test Description:
 - Tests clustering with SpectralClustering model.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.207 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING GAUSSIAN-MIXTURE

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_dataMiningGaussianMixture.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/GaussianMixture
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/Ga
```

- Test Description:
 - Tests mixtures with the GMM model.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.208 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING TIME DEP CLUSTERING FILTERED

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_TD_KMeans_Filtered.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/time_dep-clu
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/ti
```

- Test Description:
 - Tests clustering with the KMeans model and preprocessing.
- Original Author:
 - mandd
- Creation date:
 - 2016-03-30
- The classes tested in this test are:
 - DataMining

2.3.209 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING VARIATIONALGMM

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_dataMiningVariationalGMM.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/VariationalGM
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/Va
```

- Test Description:
 - Tests clustering with VBGMM (Variational Bayesian Gaussian Mixture Model).
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.210 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING AGGLOMERATIVE

This test can be found at “. /raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_dataMiningAgglomerative.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/Agglomerative
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/Agglomerative
```

- Test Description:
 - Tests clustering using the Agglomerative model.
- Original Author:
 - mandd
- Creation date:
 - 2016-07-20
- The classes tested in this test are:
 - DataMining
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2017-08-07
 - description: Modifying this test case to exercise putting the data into a new data object different than the input of to the clustering algorithm

2.3.211 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING TIME DEP CLUSTERING FILTERED

This test can be found at “. /raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_TD_MeanShift.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/time_dep_clu
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/time_dep_clu
```

- Test Description:
 - Tests clustering with the MeanShift model and preprocessing.
- Original Author:
 - mandd
- Creation date:
 - 2016-07-20
- The classes tested in this test are:
 - DataMining

2.3.212 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING TIME DEP HIERARCHICALSCIPY DTW

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_TD_hierarchical_dtw.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/time_dep_hier
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/ti
```

- Test Description:
 - Tests clustering with Hierarchical model and DTW metric.
- Original Author:
 - mandd
- Creation date:
 - 2016-10-10
- The classes tested in this test are:
 - DataMining

2.3.213 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING TIME DEP HIERARCHICALSCIPY DTW DERIVATIVE

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_TD_hierarchical_dtw_derivative.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/time_dep_hier
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/ti
```

- Test Description:
 - Tests clustering with Hierarchical model and derivative DTW metric.
- Original Author:
 - mandd
- Creation date:
 - 2016-10-21
- The classes tested in this test are:
 - DataMining

2.3.214 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING HIERARCHICALSCIPY

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_dataMiningHierarchical.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/HierarchicalS
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/Hi
```

- Test Description:
 - Tests clustering with the Hierarchical model.
- Original Author:
 - mannd
- Creation date:
 - 2016-10-10
- The classes tested in this test are:
 - DataMining

2.3.215 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING AGGLOMERATIVEDTW

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_TD_agglomerative_dtw.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/agglomerativeD
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/ag
```

- Test Description:
 - Tests clustering with Agglomerative model with DTW metric.
- Original Author:
 - mandd
- Creation date:
 - 2016-10-10
- The classes tested in this test are:
 - DataMining

2.3.216 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING AGGLOMERATIVEEUCLIDEAN

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_TD_agglomerative_euclidean.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/agglomerative
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/ag
```

- Test Description:
 - Tests clustering with Agglomerative model with Minkowski metric.
- Original Author:
 - mandd
- Creation date:
 - 2016-10-10
- The classes tested in this test are:
 - DataMining
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2017-08-07
 - description: Modifying this test case to exercise putting the data into a new data object different than the input of to the clustering algorithm

2.3.217 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING HIERARCHICALSCIPY SKL

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/test_dataMiningHierarchical_SKL_Pairwise.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/HierarchicalS
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering/Hi
```

- Test Description:
 - Tests clustering with the Hierarchical model with the SKL metric.
- Original Author:
 - mandd
- Creation date:

- 2016-12-05

- The classes tested in this test are:

- DataMining

2.3.218 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING.INTERACTIVE UI

This test can be found at “. /raven/tests/framework/PostProcessors/DataMiningPostProcessor/Clustering/hierarchical_ui.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering.interactive_UI
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clustering.in
```

- Test Description:

- This test exercises the user interface coupled with the Hierarchical Clustering available in RAVEN. This test is very similar to HierarchicalScipy except this adds the ability to test the loading, running, and tear down of the UI associated to that class.

- Original Author:

- maljdan

- Creation date:

- 2016-05-09

- The classes tested in this test are:

- PostProcessors.DataMining

2.3.219 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION EXACTPCA MLE

This test can be found at “. /raven/tests/framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction/test_dataMiningExactPCA_MLE.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensionality
```

- Test Description:

- Tests decomposition with PCA and MLE. This test exercises our ability to accept a string for n_components See Issue #649

- Original Author:

- maljdan

- Creation date:

– 2016-08-11

- The classes tested in this test are:
 - DataMining

2.3.220 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION RANDOMIZEDPCA

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction/test_dataMiningRandomizedPCA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensionality
```

- Test Description:
 - Tests decomposition with RandomizedPCA.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.221 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION KERNELPCA

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction/test_dataMiningKernelPCA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensionality
```

- Test Description:
 - Tests decomposition with KernelPCA
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.222 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION SPARSEPCA

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction/test_dataMiningSparsePCA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensionality
```

- Test Description:
 - Tests decomposition with SparsePCA
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.223 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION MINIBATCHSPARSEPCA

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction/test_dataMiningMiniBatchSparsePCA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensionality
```

- Test Description:
 - Tests decomposition with MiniBatchSparsePCA
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.224 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION TRUNCATEDSVD

This test can be found at “. /raven/tests/framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction/test_dataMiningTruncatedSVD.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensionality
```

- Test Description:
 - Test decomposition using the TruncatedSVD model.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.225 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION FASTICA

This test can be found at “. /raven/tests/framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction/test_dataMiningFastICA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensionality
```

- Test Description:
 - Tests decomposition using FastICA.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.226 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION ISOMAP

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction/test_dataMiningIsomap.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensionality
```

- Test Description:
 - Testing manifold with Isomap.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.227 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION LOCALLYLINEAREMBEDDING

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction/test_dataMiningLocallyLinearEmbedding.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensionality
```

- Test Description:
 - Tests manifold with LocallyLinearEmbedding.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.228 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION SPECTRALEMBEDDING

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction/test_dataMiningSpectralEmbedding.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensionality
```

- Test Description:
 - Tests manifold with SpectralEmbedding.
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.229 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION MULTIDIMENSIONALSCALING

This test can be found at “./raven/tests/framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction/test_dataMiningMultiDimensionalScaling.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/DimensionalityReduction
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensionality
```

- Test Description:
 - Tests manifold with MDS
- Original Author:
 - senrs
- Creation date:
 - 2015-11-24
- The classes tested in this test are:
 - DataMining

2.3.230 FRAMEWORK POSTPROCESSORS ETIMPORTERPOSTPROCESSOR

This test can be found at “./raven/tests/framework/PostProcessors/ETImporterPostProcessor/test_ETImporter.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/ETImporterPostProcessor
```

or

```
./run_framework_tests --re=framework/PostProcessors/ETImporterPostProcessor
```

- Test Description:
 - Tests of the ETImporter post-processor: it read an event-tree (ET) from an .xml file (eventTree.xml) and it imports the ET structure into a PointSet. Note that the ET needs to be in an OpenPSA format.
- Original Author:
 - mandd
- Creation date:
 - 2017-11-07
- The classes tested in this test are:
 - ETImporter

2.3.231 FRAMEWORK POSTPROCESSORS.ETIMPORTERPOSTPROCESSORSYMBOLIC

This test can be found at “./raven/tests/framework/PostProcessors/ETImporterPostProcessor/test_ETImporterSymbolic.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors.ETImporterPostProcessorSymbolic
```

or

```
./run_framework_tests --re=framework/PostProcessors.ETImporterPostProcessorSymbolic
```

- Test Description:
 - Tests of the ETImporter post-processor: it read an event-tree (ET) from an .xml file (eventTree.xml) and it imports the ET structure into a PointSet. Note that the ET needs to be in an OpenPSA format. In particular, this tests checks that capability of the PP to manage symbolic ID for the ET sequences. Note that in this configuration, a mapping file is generated
- Original Author:
 - mandd
- Creation date:
 - 2017-11-07
- The classes tested in this test are:
 - ETImporter

2.3.232 FRAMEWORK POSTPROCESSORS ETIMPORTERPOSTPROCESSORDEFINEBRANCH

This test can be found at “./raven/tests/framework/PostProcessors/ETImporterPostProcessor/test_ETImporterDefineBranch.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/ETImporterPostProcessorDefineBranch
```

or

```
./run_framework_tests --re=framework/PostProcessors/ETImporterPostProcessorDefineBranch
```

- Test Description:
 - Tests of the ETImporter post-processor: it read an event-tree (ET) from an .xml file (eventTree.xml) and it imports the ET structure into a PointSet. Note that the ET needs to be in an OpenPSA format. In particular, this tests checks that capability of the PP to manage ETs that contains by-pass branches.
- Original Author:
 - mandd
- Creation date:
 - 2017-11-07
- The classes tested in this test are:
 - ETImporter

2.3.233 FRAMEWORK POSTPROCESSORS.ETIMPORTERPOSTPROCESSORMULTIPLEET

This test can be found at “./raven/tests/framework/PostProcessors/ETImporterPostProcessor/test_ETImporterMultipleET.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors.ETImporterPostProcessorMultipleET
```

or

```
./run_framework_tests --re=framework/PostProcessors.ETImporterPostProcessorMultipleET
```

- Test Description:
 - Tests of the ETImporter post-processor: it read an event-tree (ET) from multiple .xml files (eventTree1.xml and eventTree2.xml). Note that one single ET is provided but its structure is splitted into two files, i.e., the sub ETs are linked. and it imports the fullET structure into a PointSet. Note that the ETs need to be in an OpenPSA format.
- Original Author:
 - mandd
- Creation date:
 - 2017-11-07
- The classes tested in this test are:
 - ETImporter

2.3.234 FRAMEWORK POSTPROCESSORS EXTERNALPOSTPROCESSOR.SIMPLE

This test can be found at “./raven/tests/framework/PostProcessors/ExternalPostProcessor/test_externalPostProcessor.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/ExternalPostProcessor.simple
```

or

```
./run_framework_tests --re=framework/PostProcessors/ExternalPostProcessor.simple
```

- Test Description:

- A simple example of writing an external python function and using it inside RAVEN.

Here we are testing several things: 1. We can handle data from multiple input files. 2. We can handle methods defined in multiple .py files. 3. A subset of inputs from the originating data is reported correctly, note we ask for B, but not Y (they contain the same information). 4. A subset of outputs from the originating data is reported correctly, note we ask for Z, but not C (they contain the same information). 5. Reporting an overloaded function with the appropriately qualified names: basicOps.Sum and advOps.Sum. 6. A non-overloaded function is reported correctly: Norm 7. An overloaded function name can be specified by its qualified name and only that version will be applied to the output: advOps.Delta. 8. If you ask for a function that is not defined, it will give a warning message and skip it: DoesNotExist 9. Vector return type that is appended as a column to the data: Norm 10. Vector return type that is stored in the metadata: Mean 11. Scalar or non-conformant data size stored in metadata: Min 12. Scalar or non-conformant data size warning message when attempting to store it in the output, it is instead put in the metadata: Max

- Original Author:

- maljdan

- Creation date:

- 2015-09-17

- The classes tested in this test are:

- PostProcessors.ExternalPostProcessor

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

2. revision info:

- author : talbpaul
- date : 2016-04-26
- description: Adding check for pre-existing backup files when validating, fixing comment in test, and removing 'type' in databases.

3. revision info:

- author : talbpaul
- date : 2016-06-28
- description: Adding check for pre-existing backup files when validating, fixing comment in test, and removing 'type' in databases.

4. revision info:

- author : maljdan
- date : 2017-01-17
- description: Adding test description.

2.3.235 FRAMEWORK POSTPROCESSORS EXTERNALPOSTPROCESSOR.MULTIPLE USAGE

This test can be found at “./raven/tests/framework/PostProcessors/ExternalPostProcessor/multiple_usage.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/ExternalPostProcessor.multiple_usage
```

or

```
./run_framework_tests --re=framework/PostProcessors/ExternalPostProcessor.multiple_usage
```

- Test Description:

- A simple example of writing an external python function and using it inside RAVEN. Here we are testing whether using the same external processor on multiple data objects does not cause naming issues.

- Original Author:

- maljdan

- Creation date:

- 2015-06-28

- The classes tested in this test are:

- PostProcessors.ExternalPostProcessor

2.3.236 FRAMEWORK POSTPROCESSORS EXTERNALPOSTPROCESSOR.HISTORY SET PARTITIONING

This test can be found at “./raven/tests/framework/PostProcessors/ExternalPostProcessor/test_history_set_partitioning.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/ExternalPostProcessor.history_set_partitioning
```

or

```
./run_framework_tests --re=framework/PostProcessors/ExternalPostProcessor.history_set_partitioning
```

- Test Description:

- An example of using the External Post-Processor to partition a history set by creating a new data object that removes data where the time is less than 0.0001.

- Original Author:

- alfoa

- Creation date:

- 2016-09-15

- The classes tested in this test are:

- PostProcessors.ExternalPostProcessor

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2016-10-04
- description: Adding an additional example that addresses Josh's comment.

2.3.237 FRAMEWORK POSTPROCESSORS EXTERNALPOSTPROCESSOR.HISTORY SET DELETING HISTORIES

This test can be found at `./raven/tests/framework/PostProcessors/ExternalPostProcessor/test_history_set_partitioning_and_remove_some_histories.xml`. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/ExternalPostProcessor.history_set_deleting_histories
```

or

```
./run_framework_tests --re=framework/PostProcessors/ExternalPostProcessor.history_set_deleting_histories
```

- Test Description:

- An example of using the External Post-Processor to remove some data points from a History Set. This differs from `test_history_set_partitioning.xml` as that test removed output points only in the time series, whereas this one will remove them from the input space.

- Original Author:

- alfoa

- Creation date:

- 2016-10-04

- The classes tested in this test are:

- PostProcessors.ExternalPostProcessor

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2017-01-17
- description: Added an additional example that addresses Josh's comment

2. revision info:

- author : alfoa
- date : 2016-10-04
- description: Adding test descriptions for the tests related to the ExternalPostProcessor

2.3.238 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR INTERFACEDPOSTPROCESSOR

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_interfacedPP.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/interfacedPostProcessor  
or  
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/interfacedPos
```

- Test Description:
 - Test of the interfaced post-processor interface
- Original Author:
 - mandd
- Creation date:
 - 2019-01-16
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.239 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR INTERFACEDPOSTPROCESSORPARALLEL

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_interfacedPP_parallel.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/interfacedPostProcessor  
or  
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/interfacedPos
```

- Test Description:
 - Test of the interfaced post-processor interface performed in parallel
- Original Author:
 - mandd
- Creation date:
 - 2019-01-16
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.240 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HISTORYSAMPLING

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_historySetSamplingIPP.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/historySampling
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/historySampling
```

- Test Description:
 - Tests of the HistorySetSampling interfaced post-processor and all its sampling types
- Original Author:
 - mandd
- Creation date:
 - 2016-02-09
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.241 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HISTORYSAMPLINGINTERVALAVE

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_historySetSamplingIntervalAve.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/historySamplingIntervalAve
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/historySamplingIntervalAve
```

- Test Description:
 - Tests of the HistorySetSampling post-processor with intervalAverage interpolation technique
- Original Author:
 - junc
- Creation date:
 - 2016-11-16
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.242 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HISTORYSETSNAPSHOT

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_historySetSnapshot.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/HistorySetSnapShot
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/HistorySetSnap
```

- Test Description:
 - Tests of the HistorySetSnapShot interfaced post-processor
- Original Author:
 - mandd
- Creation date:
 - 2016-02-09
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.243 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HISTORYSETSNAPSHOT-MIXED

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_historySetSnapshot_mixed.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/HistorySetSnapShotMixed
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/HistorySetSnap
```

- Test Description:
 - Tests of HistorySetSnapShot and its mixed type of snapshot techniques
- Original Author:
 - talbpaul
- Creation date:
 - 2016-06-14
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.244 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HISTORYSETSYNC

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_historySetSync.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/HistorySetSync
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/HistorySetSync
```

- Test Description:
 - Tests of the HistorySetSync interfaced post-processor
- Original Author:
 - mandd
- Creation date:
 - 2016-02-09
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.245 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HS SYNC ALL

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_historySetSyncAll.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/hs_sync_all
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/hs_sync_all
```

- Test Description:
 - Tests of the HistorySetSync interfaced post-processor and in particular the all syncMethod
- Original Author:
 - talbpaul
- Creation date:
 - 2016-04-13
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.246 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HS SYNC MIN

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_historySetSyncMin.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/hs_sync_min
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/hs_sync_min
```

- Test Description:
 - Tests of the HistorySetSync interfaced post-processor and in particular the MIN syncMethod
- Original Author:
 - talbpaul
- Creation date:
 - 2016-04-14
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.247 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HS SYNC MAX

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_historySetSyncMax.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/hs_sync_max
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/hs_sync_max
```

- Test Description:
 - Tests of the HistorySetSync interfaced post-processor and in particular the MAX syncMethod
- Original Author:
 - talbpaul
- Creation date:
 - 2016-04-14
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.248 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HS2PS

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_HS2PS.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/HS2PS
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/HS2PS
```

- Test Description:
 - Tests of the HS2PS interfaced post-processor
- Original Author:
 - mandd
- Creation date:
 - 2016-02-09
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.249 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR INTERFACEDPOSTPROCESSOR POINTSET

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_interfacedPP_pointset.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/interfacedPostProcessor
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/interfacedPostProcessor
```

- Test Description:
 - Test of the interfaced post-processor interface to deal with pointSet
- Original Author:
 - mandd
- Creation date:
 - 2019-01-16
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.250 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR TYPICALHISTORYFROMHS

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_typicalHistoryFromHS.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/TypicalHistoryFromHS
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/TypicalHistoryFromHS
```

- Test Description:
 - Tests of the TypicalHistoryFromHistorySet interfaced post-processor
- Original Author:
 - chenj
- Creation date:
 - 2016-07-07
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.251 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR RISKMEASURESDISCRETE

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_riskMeasuresDiscrete.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/RiskMeasuresDiscrete
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/RiskMeasuresDiscrete
```

- Test Description:
 - Tests of the four risk importance measures: Risk Achievement Worth (RAW), Risk Reduction Worth (RRW), Birnbaum (B) and Fussell-Vesely (FV)
- Original Author:
 - mandd
- Creation date:
 - 2016-10-31
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.252 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR RISKMEASURESDISCRETE-MULTIPLEIE

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_riskMeasuresDiscreteMultipleIE.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/RiskMeasuresDiscreteMultipleIE
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/RiskMeasuresDiscreteMultipleIE
```

- Test Description:
 - Tests of the four risk importance measures for multiple IEs: Risk Achievement Worth (RAW), Risk Reduction Worth (RRW), Birnbaum (B) and Fussell-Vesely (FV)
- Original Author:
 - mandd
- Creation date:
 - 2017-02-23
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.253 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR RISKMEASURESTIMEDEP

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_riskMonitor.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/RiskMeasuresTimeDependent
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor/RiskMeasuresTimeDependent
```

- Test Description:
 - Tests of the four risk importance measures for time dependent data: Risk Achievement Worth (RAW), Risk Reduction Worth (RRW), Birnbaum (B) and Fussell-Vesely (FV)
- Original Author:
 - mandd
- Creation date:
 - 2017-02-23
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.254 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR.HSTOPSOPERATORS

This test can be found at “./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_HistorySetToPointSetOperators.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor.HStoPSoperators
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcessor.HStoPSoperators
```

- Test Description:
 - This test is aimed to show how to use the “HStoPSOperator” InterfacedPostProcessor. The 3 basic functionalities are testes: 1) row-based projection, 2) pivot-value-based projection and 3) operator-based projection (max, min, average)
- Original Author:
 - alfoa
- Creation date:
 - 2018-02-01
- The classes tested in this test are:
 - InterfacedPostProcessor

2.3.255 FRAMEWORK POSTPROCESSORS METRIC TEST METRIC

This test can be found at “./raven/tests/framework/PostProcessors/Metrics/test_metric.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_metric
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_metric
```

- Test Description:
 - This test checks the Metric PostProcessor
- Original Author:
 - wangc
- Creation date:
 - 2017-08-29
- The classes tested in this test are:
 - PostProcessors.Metric

2.3.256 FRAMEWORK POSTPROCESSORS METRIC TEST MULTIPLE INPUT OBJECTS

This test can be found at “./raven/tests/framework/PostProcessors/Metrics/test_metric_multiple_input_objects.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_multiple_input_objects
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_multiple_input_objects
```

- Test Description:
 - This test checks the Metric PostProcessor to accept multiple input data objects
- Original Author:
 - wangc
- Creation date:
 - 2017-08-30
- The classes tested in this test are:
 - PostProcessors.Metric

2.3.257 FRAMEWORK POSTPROCESSORS METRIC TEST METRIC SKL

This test can be found at “./raven/tests/framework/PostProcessors/Metrics/test_metric_skl.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_metric_skl
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_metric_skl
```

- Test Description:
 - This test checks metrics from ScikitLearn library
- Original Author:
 - wangc
- Creation date:
 - 2017-08-30
- The classes tested in this test are:
 - PostProcessors.Metric

2.3.258 FRAMEWORK POSTPROCESSORS METRIC TEST MINKOWSKI

This test can be found at “./raven/tests/framework/PostProcessors/Metrics/test_Minkowski.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_Minkowski
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_Minkowski
```

- Test Description:
 - This test checks the Minkowski metric
- Original Author:
 - wangc
- Creation date:
 - 2017-08-30
- The classes tested in this test are:
 - PostProcessors.Metric

2.3.259 FRAMEWORK POSTPROCESSORS METRIC TEST COMPARISON STATS METRICS

This test can be found at “./raven/tests/framework/PostProcessors/Metrics/test_comparison_stats_metrics.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_comparison_stats_metrics
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_comparison_stats_metrics
```

- Test Description:
 - This test checks the Comparison Statistics Metric
- Original Author:
 - joshua-cogliati-inl
- Creation date:
 - 2017-09-12
- The classes tested in this test are:
 - PostProcessors.Metric

2.3.260 FRAMEWORK POSTPROCESSORS METRIC TEST COMPARISON STATS METRICS GRID

This test can be found at “./raven/tests/framework/PostProcessors/Metrics/test_comparison_stats_metrics_grid.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_comparison_stats_metrics_grid
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_comparison_stats_metrics_
```

- Test Description:
 - This test checks the Comparison Statistics Metrics with a Grid.
- Original Author:
 - joshua-cogliati-inl
- Creation date:
 - 2017-09-13
- The classes tested in this test are:
 - PostProcessors.Metric

2.3.261 FRAMEWORK POSTPROCESSORS METRIC TEST COMPARISON STATS METRICS

This test can be found at “./raven/tests/framework/PostProcessors/Metrics/test_comparison_stats_metrics_dists.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_comparison_stats_metrics
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_comparison_stats_metrics
```

- Test Description:
 - This test checks the Comparison Statistics Metric
- Original Author:
 - joshua-cogliati-inl
- Creation date:
 - 2017-09-12
- The classes tested in this test are:
 - PostProcessors.Metric

2.3.262 FRAMEWORK POSTPROCESSORS RAVENOUTPUTPOSTPROCESSOR.STATIC

This test can be found at “./raven/tests/framework/PostProcessors/RavenOutputPostProcessor/test_notime.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/RavenOutputPostProcessor.static
```

or

```
./run_framework_tests --re=framework/PostProcessors/RavenOutputPostProcessor.static
```

- Test Description:
 - This test checks using the RavenOutput postprocessor to read multiple RAVEN XML output files. Creates both a BasicStatistics and collocation ROM dump XML for loading, then loads comparable values from them.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-05-20
- The classes tested in this test are:
 - PostProcessors.RavenOutput

2.3.263 FRAMEWORK POSTPROCESSORS RAVENOUTPUTPOSTPROCESSOR.DYNAMIC

This test can be found at “./raven/tests/framework/PostProcessors/RavenOutputPostProcessor/test_time.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/RavenOutputPostProcessor.dynamic
```

or

```
./run_framework_tests --re=framework/PostProcessors/RavenOutputPostProcessor.dynamic
```

- Test Description:
 - This test checks using the RavenOutput postprocessor to read a dynamic RAVEN XML output file.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-06-22
- The classes tested in this test are:
 - PostProcessors.RavenOutput

2.3.264 FRAMEWORK POSTPROCESSORS RAVENOUTPUTPOSTPROCESSOR.INVALIDXMLTAG

This test can be found at “./raven/tests/framework/PostProcessors/RavenOutputPostProcessor/test_invalid_xml_tag_name.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/RavenOutputPostProcessor.invalidXMLtag
```

or

```
./run_framework_tests --re=framework/PostProcessors/RavenOutputPostProcessor.invalidXMLtag
```

- Test Description:
 - This test checks using the RavenOutput postprocessor to read multiple RAVEN XML output files (static and dynamic) for a set of variables with invalid tag names (e.g. variables created by RELAP5). This is just a mechanic test.
- Original Author:
 - alfoa
- Creation date:
 - 2017-03-13
- The classes tested in this test are:
 - PostProcessors.RavenOutput, PostProcessors.BasicStatistics

2.3.265 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR CLUSTERING KMEANS

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/test_tdmSKLearnKMeans.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/KMea
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clust
```

- Test Description:
 - Tests clustering with KMeans and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-26
- The classes tested in this test are:
 - DataMining

2.3.266 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR CLUSTER- ING MINIBATCHKMEANS

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/test_tdmSKLearnMiniBatchKMeans.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/MiniBatchKMeans
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/MiniBatchKMeans
```

- Test Description:
 - Tests clustering with MiniBatchKMeans and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-26
- The classes tested in this test are:
 - DataMining

2.3.267 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR CLUSTER- ING MEANSHIFT

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/test_tdmSKLearnMeanShift.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/MeanShift
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/MeanShift
```

- Test Description:
 - Tests clustering with MeanShift and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-26
- The classes tested in this test are:
 - DataMining

2.3.268 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR CLUSTER- ING DBSCAN

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/test_tdmSKLearnDBSCAN.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/DBSCAN
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/DBSCAN
```

- Test Description:
 - Tests clustering with DBSCAN and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-26
- The classes tested in this test are:
 - DataMining

2.3.269 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR CLUSTER- ING AFFINITYPROPOGATION

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/test_tdmSKLearnAffinityPropogation.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/AffinityPropogation
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/AffinityPropogation
```

- Test Description:
 - Tests clustering with AffinityPropogation and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-26
- The classes tested in this test are:
 - DataMining

2.3.270 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR CLUSTER- ING SPECTRALCLUSTERING

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/test_tdmSKLearnSpectralClustering.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/SpectralClustering  
or  
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/SpectralClustering
```

- Test Description:
 - Tests clustering with SpectralClustering with pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-26
- The classes tested in this test are:
 - DataMining

2.3.271 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR CLUSTER- ING GAUSSIANMIXTURE

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/test_tdmSKLearnGaussianMixture.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/GaussianMixture  
or  
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/GaussianMixture
```

- Test Description:
 - Tests mixtures with Gaussian Mixture Model and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-26
- The classes tested in this test are:
 - DataMining

2.3.272 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR CLUSTERING VARIATIONALGMM

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/test_tdmSKLearnVariationalGMM.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/VariationalGMM
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Clustering/VariationalGMM
```

- Test Description:
 - Testing clustering with VBGMM (Variational Bayesian Gaussian Mixture Modeling) and pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-26
- The classes tested in this test are:
 - DataMining

2.3.273 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION EXACTPCA

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityReduction/test_tdmSKLearnExactPCA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityReduction/ExactPCA
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityReduction/ExactPCA
```

- Test Description:
 - Tests decomposition with PCA and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-29
- The classes tested in this test are:
 - DataMining

2.3.274 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION RANDOMIZEDPCA

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityReduction/test_tdmSKLearnRandomizedPCA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityR  
or  
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Dimen
```

- Test Description:
 - Tests decomposition with RandomizedPCA and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-29
- The classes tested in this test are:
 - DataMining

2.3.275 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION KERNELPCA

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityReduction/test_tdmSKLearnKernelPCA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityR  
or  
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Dimen
```

- Test Description:
 - Tests decomposition with KernelPCA and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-29
- The classes tested in this test are:
 - DataMining

2.3.276 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION SPARSEPCA

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityReduction/test_tdmSKLearnSparsePCA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityR
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Dimen
```

- Test Description:
 - Tests decomposition with SparsePCA and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-26
- The classes tested in this test are:
 - DataMining

2.3.277 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION MINIBATCHSPARSEPCA

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityReduction/test_tdmSKLearnMiniBatchSparsePCA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityR
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Dimen
```

- Test Description:
 - Tests decomposition with MiniBatchSparsePCA and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-29
- The classes tested in this test are:
 - DataMining

2.3.278 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION TRUNCATEDSVD

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityReduction/test_tdmSKLearnTruncatedSVD.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityR  
or  
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Dimen
```

- Test Description:
 - Tests decomposition with TruncatedSVD and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-26
- The classes tested in this test are:
 - DataMining

2.3.279 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION FASTICA

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityReduction/test_tdmSKLearnFastICA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityR  
or  
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Dimen
```

- Test Description:
 - Tests decomposition with FastICA and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-29
- The classes tested in this test are:
 - DataMining

2.3.280 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION LOCALLYLINEAREMBEDDING

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityReduction/test_tdmSKLearnLocallyLinearEmbedding.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityR
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Dimen
```

- Test Description:
 - Tests manifold with LocallyLinearEmbedding and a pivot paramater.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-29
- The classes tested in this test are:
 - DataMining

2.3.281 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION MULTIDIMENSIONALSCALING

This test can be found at “./raven/tests/framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityReduction/test_tdmSKLearnMultiDimensionalScaling.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/DimensionalityR
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/Dimen
```

- Test Description:
 - Tests manifold with MDS (MultiDimensionalScaling) and a pivot parameter.
- Original Author:
 - chenj
- Creation date:
 - 2016-02-29
- The classes tested in this test are:
 - DataMining

2.3.282 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.TOPOLOGY SIMPLE

This test can be found at “./raven/tests/framework/PostProcessors/TopologicalPostProcessor/test_topology_simple.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.topology_simple
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcessor.topology_sim
```

- Test Description:
 - A simple example of the approximate Morse-Smale complex (AMSC) interface using a test function consisting of a 2D Gaussian with a single maximum and 4 local minimum occurring at the corners of the domain space. The hill in the middle is purposefully off-centered so as to create non-uniform cases at each corner allowing us to simplify each local minimum in turn to create a 4 partition case, a 3 partition case, a 2 partition case, and a single partition case.
- Original Author:
 - maljdan
- Creation date:
 - 2015-09-02
- The classes tested in this test are:
 - PostProcessors.TopologicalDecomposition
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : coglj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
 2. revision info:
 - author : maljdan
 - date : 2015-10-06
 - description: Correcting the user manual and reducing the sleepTime on these tests to reduce their total run time to 15 s on my local machine.
 3. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: Converted failing tests.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-17
 - description: Adding test description.

2.3.283 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.PERSISTENCE COUNT

This test can be found at “./raven/tests/framework/PostProcessors/TopologicalPostProcessor/test_persistence_count.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.persistence_count
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcessor.persistence_c
```

- Test Description:
 - A simple example of the approximate Morse-Smale complex (AMSC) interface where select a persistence level using the count of points in each partition, that is if a partition has fewer than x points, it will be merged into a neighboring partition. Note, that all of the “persistence” tests will use the Schwefel function for testing.
- Original Author:
 - maljdan
- Creation date:
 - 2015-09-21
- The classes tested in this test are:
 - PostProcessors.TopologicalDecomposition
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : coglj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
 2. revision info:
 - author : maljdan
 - date : 2015-10-05
 - description: Removing the local fits from the topology PP and reducing the problem sizes for the persistence tests.
 3. revision info:
 - author : maljdan
 - date : 2015-10-05
 - description: Adjusting the Schwefel function’s domain to fit better with fewer data points.
 4. revision info:
 - author : maljdan
 - date : 2015-10-06
 - description: Correcting the user manual and reducing the sleepTime on these tests to reduce their total run time to 15 s on my local machine.
 5. revision info:
 - author : talbpaul

- date : 2016-02-08
 - description: Converted failing tests.
6. revision info:
- author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
7. revision info:
- author : maljdan
 - date : 2017-01-17
 - description: Adding test description.

2.3.284 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.PERSISTENCE PROB

This test can be found at “./raven/tests/framework/PostProcessors/TopologicalPostProcessor/test_persistence_prob.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.persistence_prob
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcessor.persistence_p
```

- Test Description:

- A simple example of the approximate Morse-Smale complex (AMSC) interface where we select a persistence level based on a minimum amount of probability. That is, if the total probability weight of a partition is too small, then that partition will be merged into a neighboring partition given the normal rules of persistence simplification. Note, that all of the “persistence” tests will use the Schwefel function for testing.

- Original Author:

- maljdan

- Creation date:

- 2015-09-21

- The classes tested in this test are:

- PostProcessors.TopologicalDecomposition

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : coglj
- date : 2015-09-29
- description: Modifying external modules to use relative to working directory.

2. revision info:

- author : maljdan
- date : 2015-10-05
- description: Removing the local fits from the topology PP and reducing the problem sizes for the persistence tests.

3. revision info:

- author : maljdan
- date : 2015-10-05
- description: Adjusting the Schwefel function's domain to fit better with fewer data points.

4. revision info:

- author : maljdan
- date : 2015-10-06
- description: Correcting the user manual and reducing the sleepTime on these tests to reduce their total run time to 15 s on my local machine.

5. revision info:

- author : talbpaul
- date : 2016-02-08
- description: Converted failing tests.

6. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

7. revision info:

- author : maljdan
- date : 2017-01-17
- description: Adding test description.

2.3.285 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.PERSISTENCE VALUE

This test can be found at `./raven/tests/framework/PostProcessors/TopologicalPostProcessor/test_persistence_value.xml`. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.persistence_value
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcessor.persistence_v
```

- Test Description:

- A simple example of the approximate Morse-Smale complex (AMSC) interface where we select a persistence level based on the standard notion of the function value difference between the extrema and its nearest valued neighboring critical point. That is, larger peaks and valleys will persist longer than smaller "noisy" features. This is the standard definition of persistence used in Morse topology. Note, that all of the "persistence" tests will use the Schwefel function for testing.

- Original Author:

- maljdan

- Creation date:

- 2015-09-21

- The classes tested in this test are:

– PostProcessors.TopologicalDecomposition

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : coglj
- date : 2015-09-29
- description: Modifying external modules to use relative to working directory.

2. revision info:

- author : maljdan
- date : 2015-10-05
- description: Removing the local fits from the topology PP and reducing the problem sizes for the persistence tests.

3. revision info:

- author : maljdan
- date : 2015-10-05
- description: Adjusting the Schwefel function's domain to fit better with fewer data points.

4. revision info:

- author : maljdan
- date : 2015-10-06
- description: Correcting the user manual and reducing the sleepTime on these tests to reduce their total run time to 15 s on my local machine.

5. revision info:

- author : talbpaul
- date : 2016-02-08
- description: Converted failing tests.

6. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

7. revision info:

- author : maljdan
- date : 2017-01-17
- description: Adding test description.

2.3.286 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.PERSISTENCE FULL

This test can be found at “./raven/tests/framework/PostProcessors/TopologicalPostProcessor/test_persistence_full.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.persistence_full
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcessor.persistence_
```

- Test Description:

- A simple example of the approximate Morse-Smale complex (AMSC) interface where no persistence simplification will be done. Note, that all of the "persistence" tests will use the Schwefel function for testing.
- Original Author:
 - maljdan
- Creation date:
 - 2015-09-21
- The classes tested in this test are:
 - PostProcessors.TopologicalDecomposition
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : coglj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
 2. revision info:
 - author : maljdan
 - date : 2015-10-05
 - description: Removing the local fits from the topology PP and reducing the problem sizes for the persistence tests.
 3. revision info:
 - author : maljdan
 - date : 2015-10-05
 - description: Adjusting the Schwefel function's domain to fit better with fewer data points.
 4. revision info:
 - author : maljdan
 - date : 2015-10-06
 - description: Correcting the user manual and reducing the sleepTime on these tests to reduce their total run time to 15 s on my local machine.
 5. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: Converted failing tests.
 6. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 7. revision info:
 - author : maljdan
 - date : 2017-01-17
 - description: Adding test description.

2.3.287 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.KNN

This test can be found at “. /raven/tests/framework/PostProcessors/TopologicalPostProcessor/test_graph_knn.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.knn
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcessor.knn
```

- Test Description:
 - A simple example of the approximate Morse-Smale complex (AMSC) interface that exercises the k-nearest neighbor graph structure as the underlying connectivity model for the point cloud. Note, each of the ”graph” test cases uses the GaussianPeaks test case which consists of 4 distinctly shaped Gaussian peaks in a 2D input domain.
- Original Author:
 - maljdan
- Creation date:
 - 2015-09-21
- The classes tested in this test are:
 - PostProcessors.TopologicalDecomposition
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : coglj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
 2. revision info:
 - author : maljdan
 - date : 2015-10-06
 - description: Reducing the graph tests for the topology pp, and re-golding them, also adding a plotter to validate the results visually.
 3. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: Converted failing tests.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-17
 - description: Adding test description.

2.3.288 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.RELAXED BETA SKELETON

This test can be found at “./raven/tests/framework/PostProcessors/TopologicalPostProcessor/test_graph_bs.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.relaxed_beta_skeleton  
or  
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcessor.relaxed_beta
```

- Test Description:
 - A simple example of the approximate Morse-Smale complex (AMSC) interface that exercises the beta skeleton graph structure as the underlying connectivity model for the point cloud. Note, each of the “graph” test cases uses the GaussianPeaks test case which consists of 4 distinctly shaped Gaussian peaks in a 2D input domain.
- Original Author:
 - maljdan
- Creation date:
 - 2015-09-21
- The classes tested in this test are:
 - PostProcessors.TopologicalDecomposition
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : coglj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
 2. revision info:
 - author : maljdan
 - date : 2015-10-06
 - description: Reducing the graph tests for the topology pp, and re-golding them, also adding a plotter to validate the results visually.
 3. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: Converted failing tests.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-17
 - description: Adding test description.

2.3.289 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.RELAXED BETA SKELETON

This test can be found at “./raven/tests/framework/PostProcessors/TopologicalPostProcessor/test_graph_rbs.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.relaxed_beta_skeleton  
or  
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcessor.relaxed_beta
```

- Test Description:
 - A simple example of the approximate Morse-Smale complex (AMSC) interface that exercises the relaxed beta skeleton graph structure as the underlying connectivity model for the point cloud. Note, each of the “graph” test cases uses the GaussianPeaks test case which consists of 4 distinctly shaped Gaussian peaks in a 2D input domain.
- Original Author:
 - maljdan
- Creation date:
 - 2015-09-21
- The classes tested in this test are:
 - PostProcessors.TopologicalDecomposition
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : cogljj
 - date : 2015-09-29
 - description: Modifying external modules to use relative to working directory.
 2. revision info:
 - author : maljdan
 - date : 2015-10-06
 - description: Reducing the graph tests for the topology pp, and re-golding them, also adding a plotter to validate the results visually.
 3. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: Converted failing tests.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-17
 - description: Adding test description.

2.3.290 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.INTERACTIVE UI

This test can be found at “./raven/tests/framework/PostProcessors/TopologicalPostProcessor/test_topology_ui.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.interactive_UI
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcessor.interactive_U
```

- Test Description:
 - This test exercises the user interface coupled with the Morse-Smale topology code. This test is basically a copy of test_graph_knn.xml, but it exercises our ability to load, run, and tear down a Pyside UI.
- Original Author:
 - maljdan
- Creation date:
 - 2016-03-23
- The classes tested in this test are:
 - PostProcessors.QTopologicalDecomposition
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-07-17
 - description: Working on updating the syntax of test_topology_ui to match current devel.
 2. revision info:
 - author : maljdan
 - date : 2017-01-17
 - description: Adding test description.
 3. revision info:
 - author : maljdan
 - date : 2017-05-09
 - description: Adding this test to the automated system.

2.3.291 FRAMEWORK SAMPLERS ROM TIMEDEPROM

This test can be found at “./raven/tests/framework/ROM/test_t_rom.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/timeDepRom
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/timeDepRom
```

- Test Description:

- This tests using a general time-dependent reduced-order model.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-11-30
- The classes tested in this test are:
 - Models.ROM

2.3.292 FRAMEWORK SAMPLERS ROM TIMEDEPGUASSPOLY

This test can be found at “./raven/tests/framework/ROM/test_time_dep_scgpc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/timeDepGuassPoly
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/timeDepGuassPoly
```

- Test Description:
 - This tests using a time-dependent GaussPolynomialROM.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-03-09
- The classes tested in this test are:
 - SupervisedLearning.GaussPolynomialROM

2.3.293 FRAMEWORK.ROM.SKL TIME

This test can be found at “./raven/tests/framework/ROM/skl_timedep.xml”. This test can be called executing the following command:

```
./run_tests --re=framework.ROM.SKL_time
```

or

```
./run_framework_tests --re=framework.ROM.SKL_time
```

- Test Description:
 - Tests the construction and sampling of time-dependent ScitKitLearn ROMs. In particular, tests that if one target (time) has all the same values, but not others, right action is still taken. NOTE that when this conflicts with the dataobject-rework branch, accept ALL the dataobject-rework versions.
- Original Author:

- talbpaul
- Creation date:
 - 2018-01-25
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn

2.3.294 FRAMEWORK ROM MSR.BIWEIGHT

This test can be found at “./raven/tests/framework/ROM/MSR/test_biweight.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.biweight
```

or

```
./run_framework_tests --re=framework/ROM/MSR.biweight
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a biweight kernel function for the kernel density estimator.
 Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10

- description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.295 FRAMEWORK ROM MSR.COSINE

This test can be found at “./raven/tests/framework/ROM/MSR/test_cosine.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.cosine
```

or

```
./run_framework_tests --re=framework/ROM/MSR.cosine
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a cosine kernel function for the kernel density estimator.

Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add

3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.296 FRAMEWORK ROM MSR.EPANECHNIKOV

This test can be found at “./raven/tests/framework/ROM/MSR/test_Epanechnikov.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.Epanechnikov
```

or

```
./run_framework_tests --re=framework/ROM/MSR.Epanechnikov
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with an Epanechnikov kernel function for the kernel density estimator.
Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:

- author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
3. revision info:
- author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
4. revision info:
- author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
5. revision info:
- author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.297 FRAMEWORK ROM MSR.EXPONENTIAL

This test can be found at “./raven/tests/framework/ROM/MSR/test_exponential.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.exponential
```

or

```
./run_framework_tests --re=framework/ROM/MSR.exponential
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with an exponential kernel function for the kernel density estimator.

Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan

- date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.298 FRAMEWORK ROM MSR.GAUSSIAN

This test can be found at “./raven/tests/framework/ROM/MSR/test_Gaussian.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.Gaussian
```

or

```
./run_framework_tests --re=framework/ROM/MSR.Gaussian
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a Gaussian kernel function for the kernel density estimator.
 - Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.299 FRAMEWORK ROM MSR.LOGISTIC

This test can be found at “./raven/tests/framework/ROM/MSR/test_logistic.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.logistic
```

or

```
./run_framework_tests --re=framework/ROM/MSR.logistic
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a logistic kernel function for the kernel density estimator.
 Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06

- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.300 FRAMEWORK ROM MSR.SILVERMAN

This test can be found at “./raven/tests/framework/ROM/MSR/test_Silverman.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.Silverman
```

or

```
./run_framework_tests --re=framework/ROM/MSR.Silverman
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a Silverman kernel function for the kernel density estimator.
 Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan

- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.301 FRAMEWORK ROM MSR.TRIANGULAR

This test can be found at “./raven/tests/framework/ROM/MSR/test_triangular.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.triangular
```

or

```
./run_framework_tests --re=framework/ROM/MSR.triangular
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a triangular kernel function for the kernel density estimator.
 Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.302 FRAMEWORK ROM MSR.TRICUBE

This test can be found at “./raven/tests/framework/ROM/MSR/test_tricube.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.tricube
```

or

```
./run_framework_tests --re=framework/ROM/MSR.tricube
```

- Test Description:

- An example of using the Morse-Smale regression reduced order model with a tricube kernel function for the kernel density estimator.

Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

- maljdan

- Creation date:

- 2015-10-06

- The classes tested in this test are:

- SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-10-21
- description: Converting AMSR test files using the provided conversion script.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: first update, looking for more failing tests to add

3. revision info:

- author : maljdan
- date : 2016-02-10
- description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

4. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

5. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.303 FRAMEWORK ROM MSR.TRIWEIGHT

This test can be found at “./raven/tests/framework/ROM/MSR/test_triweight.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.triweight
```

or

```
./run_framework_tests --re=framework/ROM/MSR.triweight
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a triweight kernel function for the kernel density estimator.
Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.304 FRAMEWORK ROM MSR.UNIFORM

This test can be found at “. / raven / tests / framework / ROM / MSR / test_uniform.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.uniform
```

or

```
./run_framework_tests --re=framework/ROM/MSR.uniform
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a uniform kernel function for the kernel density estimator.
Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.305 FRAMEWORK ROM MSR.SVM

This test can be found at “./raven/tests/framework/ROM/MSR/test_SVM.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.SVM
```

or

```
./run_framework_tests --re=framework/ROM/MSR.SVM
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a support vector machine. Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Using custom sampler blocks for the MSR-SVM tests.
 5. revision info:
 - author : maljdan

- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

6. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.306 FRAMEWORK ROM MSR.SMOOTHSVM

This test can be found at “. /raven/tests/framework/ROM/MSR/test_smooth_SVM.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothSVM
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothSVM
```

- Test Description:

- An example of using the Morse-Smale regression reduced order model with a support vector machine. This is a smoothed version of MSR where local models are blended together.
Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

- maljdan

- Creation date:

- 2015-10-06

- The classes tested in this test are:

- SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-10-21
- description: Converting AMSR test files using the provided conversion script.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: first update, looking for more failing tests to add

3. revision info:

- author : maljdan
- date : 2016-02-10

- description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
4. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Using custom sampler blocks for the MSR-SVM tests.
 5. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 6. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.307 FRAMEWORK ROM MSR.SMOOTHBIWEIGHT

This test can be found at “./raven/tests/framework/ROM/MSR/test_smooth_biweight.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothBiweight
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothBiweight
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a biweight kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together. Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.

2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.308 FRAMEWORK ROM MSR.SMOOTHCOSINE

This test can be found at “./raven/tests/framework/ROM/MSR/test_smooth_cosine.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothCosine
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothCosine
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a cosine kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together. Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:

- author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
2. revision info:
- author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
3. revision info:
- author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
4. revision info:
- author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
5. revision info:
- author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.309 FRAMEWORK ROM MSR.SMOOTH EPANECHNIKOV

This test can be found at “./raven/tests/framework/ROM/MSR/test_smooth_Epanechnikov.xml”.
 This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothEpanechnikov
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothEpanechnikov
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with an Epanechnikov kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.
 - Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:

- SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-10-21
- description: Converting AMSR test files using the provided conversion script.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: first update, looking for more failing tests to add

3. revision info:

- author : maljdan
- date : 2016-02-10
- description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

4. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

5. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.310 FRAMEWORK ROM MSR.SMOOTHEXPONENTIAL

This test can be found at “./raven/tests/framework/ROM/MSR/test_smooth_exponential.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothExponential
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothExponential
```

- Test Description:

- An example of using the Morse-Smale regression reduced order model with an exponential kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.

Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

- maljdan

- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.311 FRAMEWORK ROM MSR.SMOOTHGAUSSIAN

This test can be found at “./raven/tests/framework/ROM/MSR/test_smooth_Gaussian.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothGaussian
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothGaussian
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a Gaussian kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together. Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.312 FRAMEWORK ROM MSR.SMOOTHLOGISTIC

This test can be found at “./raven/tests/framework/ROM/MSR/test_smooth_logistic.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothLogistic
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothLogistic
```

- Test Description:

- An example of using the Morse-Smale regression reduced order model with a logistic kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together. Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

- maljdan

- Creation date:

- 2015-10-06

- The classes tested in this test are:

- SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-10-21
- description: Converting AMSR test files using the provided conversion script.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: first update, looking for more failing tests to add

3. revision info:

- author : maljdan
- date : 2016-02-10
- description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

4. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

5. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.313 FRAMEWORK ROM MSR.SMOOTHSILVERMAN

This test can be found at “./raven/tests/framework/ROM/MSR/test_smooth_Silverman.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothSilverman
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothSilverman
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a Silverman kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.
Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.314 FRAMEWORK ROM MSR.SMOOTHTRIANGULAR

This test can be found at “./raven/tests/framework/ROM/MSR/test_smooth_triangular.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothTriangular
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothTriangular
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a triangular kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together. Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.315 FRAMEWORK ROM MSR.SMOOTHTRICUBE

This test can be found at “./raven/tests/framework/ROM/MSR/test_smooth_tricube.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothTricube
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothTricube
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a tricube kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together. Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.316 FRAMEWORK ROM MSR.SMOOTHTRIWEIGHT

This test can be found at “./raven/tests/framework/ROM/MSR/test_smooth_triweight.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothTriweight
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothTriweight
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a triweight kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together. Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.317 FRAMEWORK ROM MSR.SMOOTHUNIFORM

This test can be found at “./raven/tests/framework/ROM/MSR/test_smooth_uniform.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothUniform
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothUniform
```

- Test Description:
 - An example of using the Morse-Smale regression reduced order model with a uniform kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together. Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.
- Original Author:
 - maljdan
- Creation date:
 - 2015-10-06
- The classes tested in this test are:
 - SupervisedLearning.MSR
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-10-21
 - description: Converting AMSR test files using the provided conversion script.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: first update, looking for more failing tests to add
 3. revision info:
 - author : maljdan
 - date : 2016-02-10
 - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.318 FRAMEWORK ROM MSR.PARALLEL

This test can be found at “./raven/tests/framework/ROM/MSR/test_local_parallel.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.parallel
```

or

```
./run_framework_tests --re=framework/ROM/MSR.parallel
```

- Test Description:

- A copy of framework/ROM/MSR.uniform where the internal parallel system has been activated in order to test its functionality in conjunction with the MSR.

Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

- maljdan

- Creation date:

- 2015-10-28

- The classes tested in this test are:

- SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-02-08
- description: first update, looking for more failing tests to add

2. revision info:

- author : maljdan
- date : 2016-02-10
- description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

3. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

4. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.319 FRAMEWORK STOCHPOLYPICKLETEST

This test can be found at “./raven/tests/framework/ROM/pickleTests/stochpoly_pickle.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/stochPolyPickleTest
```

or

```
./run_framework_tests --re=framework/stochPolyPickleTest
```

- Test Description:
 - This test checks the pickling and unpickling of the GaussPolynomialROM
- Original Author:
 - talbpaul
- Creation date:
 - 2015-07-07
- The classes tested in this test are:
 - SupervisedLearning.GaussPolynomialROM

2.3.320 FRAMEWORK ROM COLDRESTART

This test can be found at “./raven/tests/framework/ROM/pickleTests/restart_stochpoly_rom.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/coldRestart
```

or

```
./run_framework_tests --re=framework/ROM/coldRestart
```

- Test Description:
 - This tests the ability of a ROM to be unpickled and used with minimal specification, and without the typically-associated Sampler for the GaussPolynomialROM.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-03-21
- The classes tested in this test are:
 - SupervisedLearning.GaussPolynomialROM

2.3.321 FRAMEWORK ROM PICKLETESTS LOADUNTRAINEDERROR

This test can be found at “./raven/tests/framework/ROM/pickleTests/untrained_error.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework/ROM/pickleTests/loadUntrainedError
```

or

```
./run_framework_tests --re=framework/ROM/pickleTests/loadUntrainedError
```

- Test Description:
 - This test checks that a reasonable error is given to the user if an untrained rom is unpickled then sampled.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-07-07
- The classes tested in this test are:
 - Models.ROM

2.3.322 FRAMEWORK ROM PICKLETESTS LOADNORROMERROR

This test can be found at “./raven/tests/framework/ROM/pickleTests/not_a_rom_error.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework/ROM/pickleTests/loadNorROMError
```

or

```
./run_framework_tests --re=framework/ROM/pickleTests/loadNorROMError
```

- Test Description:
 - This test checks that a reasonable error is given to the user if they attempt to unpickle a pickled object that isn't a ROM.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-07-07
- The classes tested in this test are:
 - Models.ROM

2.3.323 FRAMEWORK ROM PICKLETESTS LOADNORROMERROR

This test can be found at “./raven/scripts/externalROMloader.pyload_ROM_externally.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/pickleTests/loadNorROMError
```

or

```
./run_framework_tests --re=framework/ROM/pickleTests/loadNorROMError
```

- Test Description:
 - This test checks that a reasonable error is given to the user if they attempt to unpickle a pickled object that isn't a ROM.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-07-07
- The classes tested in this test are:
 - Models.ROM

2.3.324 FRAMEWORK ROM SKLEARN.LINEARSVC

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearSVC.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearSVC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearSVC
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the svm—LinearSVC model is tested here.
Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2016-05-02
- description: Fixing the random_state of the SVMs.

2. revision info:

- author : maljdan
- date : 2016-05-02
- description: Fixing another SVC case for older scikit-learn versions.

3. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

4. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.325 FRAMEWORK ROM SKLEARN.SVC

This test can be found at “./raven/tests/framework/ROM/SKLearn/svc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.SVC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.SVC
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the svm—SVC model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
 - date : 2016-05-02
 - description: Fixing the random_state of the SVMs.
2. revision info:
- author : maljdan
 - date : 2016-05-02
 - description: There is an issue with version compatibility in sklearn, so I am disabling one of the parameters in the input and documenting it.
3. revision info:
- author : talbpaul
 - date : 2016-09-15
 - description: other test updates
4. revision info:
- author : cogljj
 - date : 2016-11-18
 - description: Switching floats to integers because they are.
5. revision info:
- author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.326 FRAMEWORK ROM SKLEARN.NUSVC

This test can be found at “./raven/tests/framework/ROM/SKLearn/nuSVC.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.NuSVC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.NuSVC
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the svm—NuSVC model is tested here. Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2016-05-02
- description: Fixing the random_state of the SVMs.

2. revision info:

- author : maljdan
- date : 2016-05-02
- description: There is an issue with version compatibility in sklearn, so I am disabling one of the parameters in the input and documenting it.

3. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

4. revision info:

- author : coglj
- date : 2016-11-18
- description: Switching floats to integers because they are.

5. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.327 FRAMEWORK ROM SKLEARN.OCC

This test can be found at “./raven/tests/framework/ROM/SKLearn/occ.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.OCC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.OCC
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—LinearRegression model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-28
 - description: Fixing the multiclass SKL types to allow for embedded estimators.
 2. revision info:
 - author : alfoa
 - date : 2016-07-13
 - description: removed renormalization
 3. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 4. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.328 FRAMEWORK ROM SKLEARN.KNC

This test can be found at “./raven/tests/framework/ROM/SKLearn/knc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.KNC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.KNC
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the neighbors—KNeighborsClassifier model is tested here.
 - Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

2. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.329 FRAMEWORK ROM SKLEARN.RNC

This test can be found at “./raven/tests/framework/ROM/SKLearn/rnc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.RNC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.RNC
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the neighbors—RadiusNeighbors model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

2. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.330 FRAMEWORK ROM SKLEARN.NCC

This test can be found at “./raven/tests/framework/ROM/SKLearn/ncc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.NCC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.NCC
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the neighbors—NearestCentroid model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

2. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.331 FRAMEWORK ROM SKLEARN.OVR

This test can be found at “./raven/tests/framework/ROM/SKLearn/ovr.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.OVR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.OVR
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the `linear_model`—`LinearRegression` model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - `SupervisedLearning.SciKitLearn`
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-28
 - description: Fixing the multiclass SKL types to allow for embedded estimators.
 2. revision info:
 - author : alfoa
 - date : 2016-07-13
 - description: removed renormalization
 3. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 4. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.332 FRAMEWORK ROM SKLEARN.OVO

This test can be found at “`./raven/tests/framework/ROM/SKLearn/ovo.xml`”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.OVO
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.OVO
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the `linear_model`—`LinearRegression` model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - `SupervisedLearning.SciKitLearn`
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-28
 - description: Fixing the multiclass SKL types to allow for embedded estimators.
 2. revision info:
 - author : alfoa
 - date : 2016-07-13
 - description: removed renormalization
 3. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 4. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.333 FRAMEWORK ROM SKLEARN.GAUSSIANNB

This test can be found at “`./raven/tests/framework/ROM/SKLearn/gaussianNB.xml`”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.GaussianNB
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.GaussianNB
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the naiveBayes—GaussianNB model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model $(x+y)$.

- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 2. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.334 FRAMEWORK ROM SKLEARN.BERNOULLINB

This test can be found at “./raven/tests/framework/ROM/SKLearn/bernoulliNB.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.BernoulliNB
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.BernoulliNB
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the naiveBayes—BernoulliNB model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model $(x+y)$.
- Original Author:
 - maljdan
- Creation date:

– 2016-04-28

- The classes tested in this test are:

– SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

2. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.335 FRAMEWORK ROM SKLEARN.LINEARRIDGEC

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearRidgeC.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearRidgeC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearRidgeC
```

- Test Description:

– An example exercising supervised sklearn methods, specifically the linear_model—RidgeClassifier model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:

– maljdan

- Creation date:

– 2016-04-28

- The classes tested in this test are:

– SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2016-07-13
- description: removed renormalization

2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
3. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.336 FRAMEWORK ROM SKLEARN.LINEARRIDGECCV

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearRidgeCCV.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearRidgeCCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearRidgeCCV
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the linear_model—RidgeClassifierCV model is tested here.
Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-07-13
 - description: removed renormalization
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 3. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.337 FRAMEWORK ROM SKLEARN.LINEARPAC

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearPAC.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearPAC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearPAC
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the linear_model—PassiveAggressiveClassifier model is tested here.
Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-05-02
 - description: Adding a fixed random_state value to a few of the ROM tests to ensure reproducibility.
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 3. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.338 FRAMEWORK ROM SKLEARN.LINEARSGDC

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearSGDC.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearSGDC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearSGDC
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—SGDClassifier model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2016-05-02
- description: Adding a fixed random_state value to a few of the ROM tests to ensure reproducibility.

2. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

3. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.339 FRAMEWORK ROM SKLEARN.MULTINOMIALNB

This test can be found at “./raven/tests/framework/ROM/SKLearn/multinomialNB.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.MultinomialNB
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.MultinomialNB
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the naiveBayes—MultinomialNB model is tested here.
Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-28
 - description: Checkpointing. Only a few failing cases left.
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 3. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.340 FRAMEWORK ROM SKLEARN.DTC

This test can be found at “./raven/tests/framework/ROM/SKLearn/dtc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.DTC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.DTC
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the tree—DecisionTreeClassifier model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2016-05-02
- description: Adding a fixed random_state value to a few of the ROM tests to ensure reproducibility.

2. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

3. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.341 FRAMEWORK ROM SKLEARN.ETC

This test can be found at “./raven/tests/framework/ROM/SKLearn/etc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.ETC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.ETC
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the tree—ExtraTreeClassifier model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2016-05-02
- description: Adding a fixed random_state value to a few of the ROM tests to ensure reproducibility.

2. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

3. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.342 FRAMEWORK ROM SKLEARN.SVR

This test can be found at “./raven/tests/framework/ROM/SKLearn/svr.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.SVR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.SVR
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the svm—SVR model is tested here.
Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-05-02
 - description: There is an issue with version compatibility in sklearn, so I am disabling one of the parameters in the input and documenting it.
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 3. revision info:
 - author : coglj
 - date : 2016-11-18
 - description: Switching floats to integers because they are.
 4. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.343 FRAMEWORK ROM SKLEARN.KNR

This test can be found at “./raven/tests/framework/ROM/SKLearn/knr.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.KNR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.KNR
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the neighbors—KNeighborsRegressor model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

2. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.344 FRAMEWORK ROM SKLEARN.RNR

This test can be found at “./raven/tests/framework/ROM/SKLearn/rnr.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.RNR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.RNR
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the neighbors—RadiusNeighborsRegressor model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-28
 - description: Fixing RadiusNeighborsRegressor test case to use the correct SKLtype in the input file.
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 3. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.345 FRAMEWORK ROM SKLEARN.QDA

This test can be found at “./raven/tests/framework/ROM/SKLearn/qda.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.QDA
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.QDA
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the qda—QDA model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:

- maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 2. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.346 FRAMEWORK ROM SKLEARN.GP

This test can be found at “./raven/tests/framework/ROM/SKLearn/gp.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.GP
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.GP
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the GaussianProcess—GaussianProcess model is tested here.
 - Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

2. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.347 FRAMEWORK ROM SKLEARN.LINEARARD

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearARD.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearARD
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearARD
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—ARDRegression model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2016-07-13
- description: removed renormalization

2. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

3. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.348 FRAMEWORK ROM SKLEARN.LINEARBAYESIANRIDGE

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearBayesianRidge.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearBayesianRidge
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearBayesianRidge
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—BayesianRidge model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

2. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.349 FRAMEWORK ROM SKLEARN.LINEARELASTICNET

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearElasticNet.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearElasticNet
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearElasticNet
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—ElasticNet model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-07-13
 - description: removed renormalization
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 3. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.350 FRAMEWORK ROM SKLEARN.LINEARELASTICNETCV

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearElasticNetCV.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearElasticNetCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearElasticNetCV
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the linear_model—ElasticNetCV model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 2. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.351 FRAMEWORK ROM SKLEARN.LINEARLARS

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearLARS.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLARS
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLARS
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the linear_model—Lars model is tested here.
 Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:

1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
2. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.352 FRAMEWORK ROM SKLEARN.LINEARLARSCV

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearLARSCV.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLARSCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLARSCV
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the linear_model—LarsCV model is tested here.
Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 2. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.353 FRAMEWORK ROM SKLEARN.LINEARLASSO

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearLasso.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLasso
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLasso
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—Lasso model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:

- majdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2016-07-13
- description: removed renormalization

2. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

3. revision info:

- author : majdan
- date : 2017-01-19
- description: Adding this test description.

2.3.354 FRAMEWORK ROM SKLEARN.LINEARLASSOCV

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearLassoCV.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLassoCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLassoCV
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—LassoCV model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

2. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.355 FRAMEWORK ROM SKLEARN.LINEARLASSOLARS

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearLassoLARS.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLassoLARS
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLassoLARS
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—LassoLars model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 2. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.356 FRAMEWORK ROM SKLEARN.LINEARLASSOLARSCV

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearLassoLARSCV.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLassoLARSCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLassoLARSCV
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the linear_model—LassoLarsCV model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:
 - maljdan
- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
 - date : 2016-09-15
 - description: other test updates

2. revision info:

- author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.357 FRAMEWORK ROM SKLEARN.LINEARLASSOLARSIC

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearLassoLARSIC.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLassoLARSIC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLassoLARSIC
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—LassoLarsIC model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
 - date : 2016-09-15
 - description: other test updates

2. revision info:

- author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.358 FRAMEWORK ROM SKLEARN.LINEARREGRESSION

This test can be found at “. /raven/tests/framework/ROM/SKLearn/linearRegression.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearRegression
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearRegression
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—LinearRegression model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2016-07-13
- description: removed renormalization

2. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

3. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.359 FRAMEWORK ROM SKLEARN.LINEARLOGISTICREGRESSION

This test can be found at “. /raven/tests/framework/ROM/SKLearn/linearLogisticRegression.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLogisticRegression
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLogisticRegression
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—LogisticRegression model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

2. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.360 FRAMEWORK ROM SKLEARN.LINEARMULTITASKLASSO

This test can be found at “. /raven/tests/framework/ROM/SKLearn/linearMultiTaskLasso.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearMultiTaskLasso
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearMultiTaskLasso
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—MultiTaskLasso model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-07-13
 - description: removed renormalization
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 3. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.361 FRAMEWORK ROM SKLEARN.LINEARMULTITASKELASTICNET

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearMultiTaskElasticNet.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearMultiTaskElasticNet
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearMultiTaskElasticNet
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the linear_model—MultiTaskElasticNet model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-28
 - description: Adding gold files and fixing MultiTaskElasticNet
 2. revision info:
 - author : alfoa
 - date : 2016-07-13
 - description: removed renormalization
 3. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 4. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.362 FRAMEWORK ROM SKLEARN.LINEAROMP

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearOMP.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearOMP
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearOMP
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the linear_model—OrthogonalMatchingPursuit model is tested here.
 Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:

- maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 2. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.363 FRAMEWORK ROM SKLEARN.LINEAROMPCV

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearOMPCV.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearOMPCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearOMPCV
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the linear_model—OrthogonalMatchingPursuitCV model is tested here.
 Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

2. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.364 FRAMEWORK ROM SKLEARN.LINEARPERCEPTRON

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearPerceptron.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearPerceptron
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearPerceptron
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—Perceptron model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

2. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.365 FRAMEWORK ROM SKLEARN.LINEARRIDGER

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearRidgeR.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearRidgeR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearRidgeR
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—Ridge model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model ($x+y$).

- Original Author:

- maljdan

- Creation date:

- 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : talbpaul
- date : 2016-09-15
- description: other test updates

2. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.366 FRAMEWORK ROM SKLEARN.LINEARRIDGERCV

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearRidgeRCV.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearRidgeRCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearRidgeRCV
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—RidgeCV model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-07-13
 - description: removed renormalization
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 3. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.367 FRAMEWORK ROM SKLEARN.LINEARPAR

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearPAR.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearPAR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearPAR
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the linear_model—PassiveAggressiveRegressor model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28
- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-05-02
 - description: Adding a fixed random_state value to a few of the ROM tests to ensure reproducibility.
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 3. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.368 FRAMEWORK ROM SKLEARN.LINEARSGDR

This test can be found at “./raven/tests/framework/ROM/SKLearn/linearSGDR.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearSGDR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearSGDR
```

- Test Description:
 - An example exercising supervised sklearn methods, specifically the linear_model—SGDRegressor model is tested here.
 Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).
- Original Author:
 - maljdan
- Creation date:
 - 2016-04-28

- The classes tested in this test are:
 - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-05-02
 - description: Adding a fixed random_state value to a few of the ROM tests to ensure reproducibility.
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: other test updates
 3. revision info:
 - author : maljdan
 - date : 2017-01-19
 - description: Adding this test description.

2.3.369 FRAMEWORK SAMPLERS ROM SOBOL STATICSOBOLROMSMOLYAK

This test can be found at “./raven/tests/framework/ROM/Sobol/test_sobol_rom.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/staticSobolRomSmolyak
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/staticSobolRomSmolyak
```

- Test Description:
 - This test checks the operation of the sampler and ROM together.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-03-03
- The classes tested in this test are:
 - Samplers.Sobol,SupervisedLearning.HDMRRom

2.3.370 FRAMEWORK SAMPLERS ROM SOBOL STATICSOBOLROMSMOLYAK

This test can be found at “./raven/tests/framework/ROM/Sobol/test_sobol_tensor.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/staticSobolRomSmolyak
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/staticSobolRomSmolyak
```

- Test Description:
 - This test checks the operation of the sampler and model, using the tensor sparse grid.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-07-07
- The classes tested in this test are:
 - Samplers.Sobol,SupervisedLearning.HDMRRom

2.3.371 FRAMEWORK SAMPLERS ROM SOBOL ADAPTIVESOBOLMAXRUNS

This test can be found at “./raven/tests/framework/ROM/Sobol/test_adapt_sobol_maxruns.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/AdaptiveSobolMaxRuns
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/AdaptiveSobolMaxRuns
```

- Test Description:
 - This tests using the AdaptiveSobol sampler to construct HDMRRom ROMs, but restricted by a specified number of samples (maxRuns in the sampler).
- Original Author:
 - talbpaul
- Creation date:
 - 2016-02-08
- The classes tested in this test are:
 - Samplers.AdaptiveSobol,SupervisedLearning.HDMRRom

2.3.372 FRAMEWORK SAMPLERS ROM SOBOL ADAPTIVESOBOLPARALLEL

This test can be found at “./raven/tests/framework/ROM/Sobol/test_adapt_sobol_parallel.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/AdaptiveSobolParallel
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/AdaptiveSobolParallel
```

- Test Description:
 - This tests using the AdaptiveSobol sampler to construct HDMRRom ROMs, in parallel.
- Original Author:

- talbpaul
- Creation date:
 - 2016-02-08
- The classes tested in this test are:
 - Samplers.AdaptiveSobol,SupervisedLearning.HDMRRom

2.3.373 FRAMEWORK SAMPLERS ROM SOBOLE TIMEDEPENDENT

This test can be found at “./raven/tests/framework/ROM/Sobol/test_time_dep_sobol.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/TimeDependent
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/TimeDependent
```

- Test Description:
 - This test checks the construction of a time-dependent HDMRRom.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-03-09
- The classes tested in this test are:
 - SupervisedLearning.HDMRRom

2.3.374 FRAMEWORK ROM TIMESERIES.ARMA

This test can be found at “./raven/tests/framework/ROM/TimeSeries/test_ARMA.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries.ARMA
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries.ARMA
```

- Test Description:
 - This test is aimed to check the possibility to train an ARMA+Fourier model and its capability to generate intrinsically stochastic time series
- Original Author:
 - alfoa
- Creation date:
 - 2017-02-02

- The classes tested in this test are:
 - SupervisedLearning.ARMA
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-02-03
 - description: Adding this test description.

2.3.375 FRAMEWORK ROM TIMESERIES.ARMAPARALLEL

This test can be found at “./raven/tests/framework/ROM/TimeSeries/test_ARMA_parallel.xml”.
 This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries.ARMAParallel
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries.ARMAParallel
```

- Test Description:
 - A copy of framework/ROM/TimeSeries.ARMA where the internal parallel system has been activated in order to test its functionality in conjunction with the ARMA model.
 This test is aimed to check the possibility to train an ARMA+Fourier model and its capability to generate intrinsically stochastic time series
- Original Author:
 - alfoa
- Creation date:
 - 2017-02-02
- The classes tested in this test are:
 - SupervisedLearning.ARMA
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2017-02-03
 - description: Adding this test description.
 2. revision info:
 - author : talbpaul
 - date : 2017-07-12
 - description: Inserted ”reseedCopies” option as False, batchSize to 2

2.3.376 FRAMEWORK ROM TIMESERIES.ARMAPARALLELRESEED

This test can be found at “./raven/tests/framework/ROM/TimeSeries/arma_reseed_precursor.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries.ARMParallelReseed
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries.ARMParallelReseed
```

- Test Description:
 - Builds a reseeding copy of the ARMA to test multiple evaluations return different values; this run only creates the arma and pickles it.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-07-12
- The classes tested in this test are:
 - SupervisedLearning.ARMA
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2017-07-12
 - description: created

2.3.377 FRAMEWORK ROM TIMESERIES.ARMARESEEDTEST

This test can be found at “./raven/tests/framework/ROM/TimeSeries/arma_reseed_test.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries.ARMAREseedTest
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries.ARMAREseedTest
```

- Test Description:
 - Runs an unpickled ARMA ROM in internal parallel and assures the histories generated are not identical (expected_fail = True). Note that the gold file is created by coping ARMAparallel/results_1.csv to gold/ARMAparallel/results_0.csv, then we make sure they are not the same through expected_fail
- Original Author:
 - talbpaul
- Creation date:
 - 2017-07-12

- The classes tested in this test are:
 - SupervisedLearning.ARMA
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2017-07-12
 - description: created

2.3.378 FRAMEWORK SAMPLERS ADAPTIVEBATCH.GREEDYDISTANCE

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_greedy_d.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.GreedyDistance
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.GreedyDistance
```

- Test Description:
 - An example of using the limit surface post-processor using the greedy selection algorithm with the distance scoring function. That is, the point to be selected will be furthest from all existing points that have been or are being evaluated.
Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).
- Original Author:
 - maljdan
- Creation date:
 - 2015-11-03
- The classes tested in this test are:
 - Samplers.LimitSurfaceSearch
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-11-20
 - description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: First update, looking for more failing tests to add.
 3. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

4. revision info:

- author : maljdan
- date : 2017-01-18
- description: Adding test description.

2.3.379 FRAMEWORK SAMPLERS ADAPTIVEBATCH.GREEDYDISTANCEPERSISTENCE

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_greedy_dp.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.GreedyDistancePersistence
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.GreedyDistancePersistence
```

- Test Description:

- An example of using the limit surface post-processor using the greedy selection algorithm with the distance+persistence scoring function. That is, the point to be selected will be a combination of distance from other points and it will have low persistence, that is to say that its label has changed frequently indicating it is in an uncertain area.

Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

- maljdan

- Creation date:

- 2015-11-03

- The classes tested in this test are:

- Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-11-20
- description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: First update, looking for more failing tests to add.

3. revision info:

- author : maljdan

- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

4. revision info:

- author : maljdan
- date : 2017-01-18
- description: Adding test description.

2.3.380 FRAMEWORK SAMPLERS ADAPTIVEBATCH.MAXPDISTANCE

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_maxp_d.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.MaxPDistance
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.MaxPDistance
```

- Test Description:

- An example of using the limit surface post-processor with a maximum persistence batch selection algorithm with the distance scoring function. That is, the points to be selected will be topologically distinct maxima in terms of distance from already sampled points. This differs from the maximum value maxima as this looks at points with the highest topological persistence.

Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

- maljdan

- Creation date:

- 2015-11-03

- The classes tested in this test are:

- Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-11-20
- description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: First update, looking for more failing tests to add.

3. revision info:

- author : maljdan
- date : 2016-04-06

- description: Updating test cases to reflect the changes to the user input.
4. revision info:
- author : maljdan
 - date : 2017-01-18
 - description: Adding test description.

2.3.381 FRAMEWORK SAMPLERS ADAPTIVEBATCH.MAXPDISTANCEPERSISTENCE

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_maxp_dp.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.MaxPDistancePersistence
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.MaxPDistancePersistence
```

- Test Description:

- An example of using the limit surface post-processor with a maximum persistence batch selection algorithm with the distance+persistence scoring function. That is, the points to be selected will be topologically distinct maxima in terms of a combination of distance from already sampled points and also the temporal inconsistency of the label for this point (points with more volatility are preferred). This differs from the maximum value maxima as this looks at points with the highest topological persistence.

Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

- maljdan

- Creation date:

- 2015-11-03

- The classes tested in this test are:

- Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-11-20
- description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: First update, looking for more failing tests to add.

3. revision info:

- author : maljdan
- date : 2016-04-06

- description: Updating test cases to reflect the changes to the user input.
4. revision info:
- author : maljdan
 - date : 2017-01-18
 - description: Adding test description.

2.3.382 FRAMEWORK SAMPLERS ADAPTIVEBATCH.MAXVDISTANCE

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_maxv_d.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.MaxVDistance
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.MaxVDistance
```

- Test Description:

- An example of using the limit surface post-processor with a maximum value batch selection algorithm with the distance scoring function. That is, the points to be selected will be topologically distinct maxima in terms of distance from already sampled points. This differs from the maximum persistence maxima as this looks at distinct local maxima with the highest value.

Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

- maljdan

- Creation date:

- 2015-11-03

- The classes tested in this test are:

- Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-11-20
- description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: First update, looking for more failing tests to add.

3. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

4. revision info:

- author : maljdan
- date : 2017-01-18
- description: Adding test description.

2.3.383 FRAMEWORK SAMPLERS ADAPTIVEBATCH.MAXVDISTANCE

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_maxv_dp.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.MaxVDistance
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.MaxVDistance
```

- Test Description:

- An example of using the limit surface post-processor with a maximum value batch selection algorithm with the distance+persistence scoring function. That is, the points to be selected will be topologically distinct maxima in terms of a combination of distance from already sampled points and also the temporal inconsistency of the label for this point (points with more volatility are preferred). This differs from the maximum persistence maxima as this looks at distinct local maxima with the highest value.

Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

- maljdan

- Creation date:

- 2015-11-03

- The classes tested in this test are:

- Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-11-20
- description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: First update, looking for more failing tests to add.

3. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

4. revision info:

- author : maljdan
- date : 2017-01-18
- description: Adding test description.

2.3.384 FRAMEWORK SAMPLERS ADAPTIVEBATCH.PRERANKINGSIMPLIFICATION

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_pre.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.PreRankingSimplification
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.PreRankingSimplification
```

- Test Description:

- A copy of framework/Samplers/AdaptiveBatch.MaxPDistance (test_maxp.d.xml) except it has been modified to provide a simplification value which is used to set a level for persistence simplification before extracting local maximum from either the maxP or maxV batch strategies. In this example, the value is 0.5, so any persistence value less than 0.5 of the scoring function’s range of values is removed and thus we may end up with very few local maxima candidates.

Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

- maljdan

- Creation date:

- 2015-11-03

- The classes tested in this test are:

- Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-11-20
- description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: First update, looking for more failing tests to add.

3. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

4. revision info:
 - author : maljdan
 - date : 2017-01-18
 - description: Adding test description.

2.3.385 FRAMEWORK SAMPLERS ADAPTIVEBATCH.POSTRANKINGTHRESHOLDING

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_post.xml”.

This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.PostRankingThresholding
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.PostRankingThresholding
```

- Test Description:
 - A copy of framework/Samplers/AdaptiveBatch.MaxPDistance (test_maxp.d.xml) except it has been modified to provide a threshold value which is used to reject samples whose score is less than a given percentage of the scoring range. Thus, if the threshold is .75 and the scores range from 0-10, then any score less than 7.5 will be rejected.
 - Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).
- Original Author:
 - maljdan
- Creation date:
 - 2015-11-03
- The classes tested in this test are:
 - Samplers.LimitSurfaceSearch
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-11-20
 - description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: First update, looking for more failing tests to add.
 3. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 4. revision info:
 - author : maljdan
 - date : 2017-01-18
 - description: Adding test description.

2.3.386 FRAMEWORK SAMPLERS ADAPTIVEBATCH.THICKENEDBAND

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_thick.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.ThickenedBand
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.ThickenedBand
```

- Test Description:

- A copy of framework/Samplers/AdaptiveBatch.MaxPDistance (test_maxp.d.xml) except it has been modified to provide a thickened band of candidates for scoring rather than only the points that lie on the limit surface of the current reduced order model representing the data.

Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

- maljdan

- Creation date:

- 2015-11-03

- The classes tested in this test are:

- Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-11-20
- description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: First update, looking for more failing tests to add.

3. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

4. revision info:

- author : maljdan
- date : 2017-01-18
- description: Adding test description.

2.3.387 FRAMEWORK SAMPLERS ADAPTIVEBATCH.INVALIDPRERANKINGSIMPLIFICATION

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_invalid_pre.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.InvalidPreRankingSimplification
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.InvalidPreRankingSimplification
```

- Test Description:

- An example of using the limit surface post-processor with an invalid simplification value. This should degrade gracefully by defaulting to a simplification of 0 and warning the user of the change made to the execution.

Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

- maljdan

- Creation date:

- 2015-11-03

- The classes tested in this test are:

- Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-11-20
- description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: First update, looking for more failing tests to add.

3. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

4. revision info:

- author : maljdan
- date : 2017-01-18
- description: Adding test description.

2.3.388 FRAMEWORK SAMPLERS ADAPTIVEBATCH.INVALIDPOSTRANKINGSIMPLIFICATION

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_invalid_post.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.InvalidPostRankingSimplification
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.InvalidPostRankingSimplification
```

- Test Description:

- An example of using the limit surface post-processor with an invalid threshold value. This should degrade gracefully by defaulting to a threshold of 0 and warning the user of the change made to the execution.

Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

- maljdan

- Creation date:

- 2015-11-03

- The classes tested in this test are:

- Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-11-20
- description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: First update, looking for more failing tests to add.

3. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

4. revision info:

- author : maljdan
- date : 2017-01-18
- description: Adding test description.

2.3.389 FRAMEWORK SAMPLERS ADAPTIVEBATCH.INVALIDMAXBATCHSIZE

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_invalid_mbs.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.InvalidMaxBatchSize
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.InvalidMaxBatchSize
```

- Test Description:

- An example of using the limit surface post-processor with an invalid maximum batch size. This should degrade gracefully by defaulting to a maximum batch size of 1 and warning the user of the change made to the execution.

Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

- maljdan

- Creation date:

- 2015-11-03

- The classes tested in this test are:

- Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : maljdan
- date : 2015-11-20
- description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

2. revision info:

- author : talbpaul
- date : 2016-02-08
- description: First update, looking for more failing tests to add.

3. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

4. revision info:

- author : maljdan
- date : 2017-01-18
- description: Adding test description.

2.3.390 FRAMEWORK SAMPLERS ADAPTIVEBATCH.INVALIDSCORINGSTRATEGY

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_invalid_score.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.InvalidScoringStrategy
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.InvalidScoringStrategy
```

- Test Description:
 - An example of using the limit surface post-processor with an invalid scoring strategy. This should print a message and exit.
Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).
- Original Author:
 - maljdan
- Creation date:
 - 2015-11-03
- The classes tested in this test are:
 - Samplers.LimitSurfaceSearch
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-11-20
 - description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: First update, looking for more failing tests to add.
 3. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 4. revision info:
 - author : maljdan
 - date : 2017-01-18
 - description: Adding test description.

2.3.391 FRAMEWORK SAMPLERS ADAPTIVEBATCH.INVALIDBATCHSTRATEGY

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_invalid_batch.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.InvalidBatchStrategy
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.InvalidBatchStrategy
```

- Test Description:
 - An example of using the limit surface post-processor with an invalid batch strategy which will fail with an error message.
Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).
- Original Author:
 - maljdan
- Creation date:
 - 2015-11-03
- The classes tested in this test are:
 - Samplers.LimitSurfaceSearch
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-11-20
 - description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.
 2. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: First update, looking for more failing tests to add.
 3. revision info:
 - author : maljdan
 - date : 2017-01-18
 - description: Adding test description.

2.3.392 FRAMEWORK SAMPLERS ADAPTIVEBATCH.INVALIDPOSTRANKINGSIMPLIFICATION

This test can be found at “./raven/tests/framework/Samplers/AdaptiveBatch/test_invalid_thick.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.InvalidPostRankingSimplification
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.InvalidPostRankingSimplification
```

- Test Description:
 - An example of using the limit surface post-processor with an invalid threshold value. This should degrade gracefully by defaulting to a threshold of 0 and warning the user of the change made to the execution.
Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).
- Original Author:
 - maljdan
- Creation date:
 - 2015-11-03
- The classes tested in this test are:
 - Samplers.LimitSurfaceSearch
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2015-11-20
 - description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.
 2. revision info:
 - author : maljdan
 - date : 2015-11-23
 - description: Adjusting the invalid thickness example to replicate the default distancePersistence scoring function rather than the distance scoring function (which fails on the HPC for some yet undiscovered reason).
 3. revision info:
 - author : talbpaul
 - date : 2016-02-08
 - description: First update, looking for more failing tests to add.
 4. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 5. revision info:
 - author : maljdan
 - date : 2017-01-18
 - description: Adding test description.

2.3.393 FRAMEWORK SAMPLERS CATEGORICAL.STRINGS

This test can be found at “./raven/tests/framework/Samplers/Categorical/string_vars.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Categorical.Strings
```

or

```
./run_framework_tests --re=framework/Samplers/Categorical.Strings
```

- Test Description:
 - Tests the ability to use the Categorical distribution along with Functions to essentially sample strings for variables. The model run is a simple projectile motion problem that can be run in either “stepper” or “analytic” mode. The output of the model is “height” as a time-dependent variable. The analytic mode is exact, but the stepper mode is intentionally chosen to be a poor approximation (too few steps taken).
- Original Author:
 - talbpaul
- Creation date:
 - 2018-01-31
- The classes tested in this test are:
 - Samplers.Categorical,Function

2.3.394 FRAMEWORK SAMPLERS CATEGORICAL.RESTART

This test can be found at “./raven/tests/framework/Samplers/Categorical/string_vars_restart.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Categorical.Restart
```

or

```
./run_framework_tests --re=framework/Samplers/Categorical.Restart
```

- Test Description:
 - Tests restarting from input spaces with string variables (from categorical+function) as well as restarting a HistorySet.
The difference between input and output spaces is in the output variable “restartID”. In the data being restarted from, the value is 1.0, while in the new samples taken, the value is 2.0.
The restart history CSVs that should have a “1.0” restart ID are 0,2,6,8,9,11,15,17,18,20,24,26 The restart history CSVs that should have a “2.0” restart ID are 1,3,4,5,7,10,12,13,14,16,19,21,22,23,25
- Original Author:
 - talbpaul
- Creation date:
 - 2018-01-31
- The classes tested in this test are:
 - Samplers.Categorical,Function

2.3.395 FRAMEWORK SAMPLERS CUSTOMSAMPLER.CUSTOMSAMPLERFROMFILE

This test can be found at “./raven/tests/framework/Samplers/CustomSampler/test_Custom_Sampler_File.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/CustomSampler.customSamplerFromFile
```

or

```
./run_framework_tests --re=framework/Samplers/CustomSampler.customSamplerFromFile
```

- Test Description:
 - An example of using the Custom Sampler object. In this test the realization coordinates are collected from a Files object of type CSV.
- Original Author:
 - alfoa
- Creation date:
 - 2016-05-24
- The classes tested in this test are:
 - Samplers.CustomSampler, Files.Input
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-05-25
 - description: Fixed absolute path
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: Test updates
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.396 FRAMEWORK SAMPLERS CUSTOMSAMPLER.CUSTOMSAMPLERFROMDATAOBJECT

This test can be found at “./raven/tests/framework/Samplers/CustomSampler/test_Custom_Sampler_DataObject.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/CustomSampler.customSamplerFromDataObject
```

or

```
./run_framework_tests --re=framework/Samplers/CustomSampler.customSamplerFromDataObject
```

- Test Description:

- An example of using the Custom Sampler object. In this test the realization coordinates are directly taken from a DataObjec of type PointSet
- Original Author:
 - alfoa
- Creation date:
 - 2016-05-25
- The classes tested in this test are:
 - Samplers.CustomSampler, DataObjects.PointSet
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : alfoa
 - date : 2016-05-25
 - description: Fixed absolute path
 2. revision info:
 - author : talbpaul
 - date : 2016-09-15
 - description: Test updates
 3. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.397 FRAMEWORK SAMPLERS DYNAMICEVENTTREES.TESTCLASSICDETSHORTRAVEN

This test can be found at “. /raven/tests/framework/Samplers/DynamicEventTrees/testDETshort.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/DynamicEventTrees.testClassicDETshortRAVEN
```

or

```
./run_framework_tests --re=framework/Samplers/DynamicEventTrees.testClassicDETshortRAVEN
```

- Test Description:
 - An example of using the Dynamic Event Tree Methodology with an external Code (RELAP7 in this case). This test is a fast executing one that is aimed to check the mechanics of the DET methodology.
- Original Author:
 - alfoa
- Creation date:
 - 2015-10-05
- The classes tested in this test are:

- Samplers.DynamicEventTree, Models.Code
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input
 2. revision info:
 - author : talbpaul
 - date : 2016-04-26
 - description: Added check for pre-existing backup files when validating
 3. revision info:
 - author : alfoa
 - date : 2016-04-27
 - description: New subdirectories structure
 4. revision info:
 - author : maljdan
 - date : 2016-08-03
 - description: Removing PrintCSV PostProcessor from the DET test cases.
 5. revision info:
 - author : maljdan
 - date : 2016-08-08
 - description: Fixing DET test case.
 6. revision info:
 - author : alfoa
 - date : 2016-10-20
 - description: Modified XSD and removed dim attribute from all the tests
 7. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.398 FRAMEWORK SAMPLERS DYNAMICEVENTTREES.TESTHYBRIDDETSHORTRAVEN

This test can be found at “. /raven/tests/framework/Samplers/DynamicEventTrees/testHybridDET.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/DynamicEventTrees.testHybridDETshortRAVEN
```

or

```
./run_framework_tests --re=framework/Samplers/DynamicEventTrees.testHybridDETshortRAVEN
```

- Test Description:
 - An example of using the Dynamic Event Tree Methodology (Hybrid Dynamic Event Tree) with an external Code (RELAP7 in this case). This test is a fast executing one that is aimed to check the mechanics of the DET methodology, when epistemic uncertainties need to be modeled.

- Original Author:
 - alfoa
- Creation date:
 - 2015-10-05
- The classes tested in this test are:
 - Samplers.DynamicEventTree, Models.Code
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : cogljj
 - date : 2016-03-21
 - description: Fixing dynamic event tree RELAP-7 inputs.
 2. revision info:
 - author : maljdan
 - date : 2016-04-06
 - description: Updating test cases to reflect the changes to the user input.
 3. revision info:
 - author : talbpaul
 - date : 2016-04-26
 - description: Added check for pre-existing backup files when validating
 4. revision info:
 - author : alfoa
 - date : 2016-04-27
 - description: New subdirectories structure
 5. revision info:
 - author : maljdan
 - date : 2016-08-03
 - description: Removing PrintCSV PostProcessor from the DET test cases.
 6. revision info:
 - author : alfoa
 - date : 2016-10-20
 - description: Modified XSD and removed dim attribute from all the tests
 7. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.399 FRAMEWORK TESTADAPTIVEDYNAMICEVENTTREERAVEN

This test can be found at “./raven/tests/framework/Samplers/DynamicEventTrees/test_adaptive_det_simple.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/testAdaptiveDynamicEventTreeRAVEN
```

or

```
./run_framework_tests --re=framework/testAdaptiveDynamicEventTreeRAVEN
```

- Test Description:
 - This test is aimed to test the capability of RAVEN to employ the Adaptive Dynamic Event Tree Sampling strategy (using RELAP7 as system code)
- Original Author:
 - @alfoa
- Creation date:
 - 2015-01-26
- The classes tested in this test are:
 - Samplers.AdaptiveDET
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : @alfoa
 - date : 2016-04-27
 - description: Updating the test in order to accept the new subdirectories' structure

2.3.400 FRAMEWORK TESTADAPTIVEHYBRIDDYNAMICEVENTTREERAVEN

This test can be found at “./raven/tests/framework/Samplers/DynamicEventTrees/test_adaptive_hybrid_det.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/testAdaptiveHybridDynamicEventTreeRAVEN
```

or

```
./run_framework_tests --re=framework/testAdaptiveHybridDynamicEventTreeRAVEN
```

- Test Description:
 - This test is aimed to test the capability of RAVEN to employ the Adaptive Hybrid Dynamic Event Tree Sampling strategy (using RELAP7 as system code)
- Original Author:
 - @alfoa
- Creation date:
 - 2015-01-26
- The classes tested in this test are:

- Samplers.AdaptiveDET

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : @alfoa
- date : 2016-04-27
- description: Updating the test in order to accept the new subdirectories' structure

2.3.401 FRAMEWORK SAMPLERS ENSEMBLEDSAMPLER.ENSEMBLESAMPLERDUMMY

This test can be found at “./raven/tests/framework/Samplers/EnsembledSampler/test_EnsembleSamplerDummy.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamplerDummy
```

or

```
./run_framework_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamplerDummy
```

- Test Description:

- An example of using the EnsembleForward sampler aimed to combine multiple forward sampling techniques (MonteCarlo, Grid, Stratified, etc.). This test uses a Dummy Model in order to check that the sampled values are correctly passed to the Model entity.

- Original Author:

- alfoa

- Creation date:

- 2016-04-20

- The classes tested in this test are:

- Samplers.EnsembleForward, Models.Dummy

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2016-04-20
- description: Finalized EnsembleSampler

2. revision info:

- author : alfoa
- date : 2016-05-25
- description: Finalized merge request. Closes #559

3. revision info:

- author : talbpaul
- date : 2016-09-15
- description: Test updates

4. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

5. revision info:

- author : talbpaul
- date : 2017-09-27
- description: Added seed to samplerInit for testing

2.3.402 FRAMEWORK SAMPLERS ENSEMBLEDSAMPLER.ENSEMBLESAMPLEREXTMODEL

This test can be found at “. /raven/tests/framework/Samplers/EnsembledSampler/test_EnsembleSamplerExtModel.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamplerExtModel
```

or

```
./run_framework_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamplerExtModel
```

- Test Description:

- An example of using the EnsembleForward sampler aimed to combine multiple forward sampling techniques (MonteCarlo, Grid, Stratified, etc.). This test uses an ExternalModel in order to testify that this sampling strategy can work with RAVEN internal developed Models.

- Original Author:

- alfoa

- Creation date:

- 2016-04-20

- The classes tested in this test are:

- Samplers.EnsembleForward, Models.ExternalModel

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

- author : alfoa
- date : 2016-04-20
- description: Finalized EnsembleForward Sampler

2. revision info:

- author : talbpaul
- date : 2016-09-15
- description: Test updates

3. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.403 FRAMEWORK SAMPLERS ENSEMBLED SAMPLER.ENSEMBLESAMPLERDUMMY

This test can be found at “./raven/tests/framework/Samplers/EnsembledSampler/test_EnsembleSamplerFunction.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamplerDummy
```

or

```
./run_framework_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamplerDummy
```

- Test Description:
 - This test uses a Dummy Model in order to check that the values generated by functions in the ensemble sampler are correctly passed to the Model entity.
- Original Author:
 - mandd
- Creation date:
 - 2017-05-25
- The classes tested in this test are:
 - Samplers.EnsembleForward, Models.Dummy

2.3.404 FRAMEWORK SAMPLERS ENSEMBLED SAMPLER.ENSEMBLESAMPLERCONSTANTS

This test can be found at “./raven/tests/framework/Samplers/EnsembledSampler/test_EnsembleSamplerConstants.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamplerConstants
```

or

```
./run_framework_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamplerConstants
```

- Test Description:
 - Tests the use of constants in the EnsembleForward sampler.
- Original Author:
 - talbpaul
- Creation date:
 - 2017-08-30
- The classes tested in this test are:
 - Samplers.EnsembleForward

2.3.405 FRAMEWORK SAMPLERS RESTART MC

This test can be found at “./raven/tests/framework/Samplers/Restart/test_restart_MC.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart/MC
```

or

```
./run_framework_tests --re=framework/Samplers/Restart/MC
```

- Test Description:
 - Tests restarting a Monte Carlo sampling from restart. `makeCoarse` samples initial data, then `makeRestart` makes additional samples, restarting from the first set of samples. `makeFine` does all the samples without restart for comparison. The model for “coarse” always returns a value of 1, while the model for “restart” returns a value of 2, so you can tell which samples came from which sampling strategy.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-07-07
- The classes tested in this test are:
 - `Samplers.MonteCarlo`
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : @talbpaul
 - date : 2016-06-01
 - description: None

2.3.406 FRAMEWORK SAMPLERS RESTART STOCHPOLY

This test can be found at “./raven/tests/framework/Samplers/Restart/test_restart_stochpoly.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart/StochPoly
```

or

```
./run_framework_tests --re=framework/Samplers/Restart/StochPoly
```

- Test Description:
 - The essence of this test is to demonstrate the input space when generated from restart or from scratch are identical. The external models are organized so that outputs from the restart data have an output value of 1.0, and from the higher-fidelity sampler have an output value of 2.0. Obviously using different models with restarts is a terrible idea in general, but makes this test work. In the end, “fine.csv” and “restart.csv” should have identical input space, but different output space; all the output of “fine.csv” should be 2.0, while the restarted points in “restart.csv” should be 1.0
- Original Author:

- talbpaul
- Creation date:
 - 2015-07-07
- The classes tested in this test are:
 - Samplers.SparseGridCollocation

2.3.407 FRAMEWORK SAMPLERS RESTART SOBOL

This test can be found at “./raven/tests/framework/Samplers/Restart/test_restart_sobol.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart/Sobol
```

or

```
./run_framework_tests --re=framework/Samplers/Restart/Sobol
```

- Test Description:
 - The essence of this test is to demonstrate the input space when generated from restart or from scratch are identical. The external models are organized so that outputs from the restart data have an output value of 1.0, and from the higher-fidelity sampler have an output value of 2.0. Obviously using different models with restarts is a terrible idea in general, but makes this test work. In the end, "fine.csv" and "restart.csv" should have identical input space, but different output space; all the output of "fine.csv" should be 2.0, while the restarted points in "restart.csv" should be 1.0
- Original Author:
 - talbpaul
- Creation date:
 - 2015-07-07
- The classes tested in this test are:
 - Samplers.Sobol

2.3.408 FRAMEWORK SAMPLERS RESTART GRID

This test can be found at “./raven/tests/framework/Samplers/Restart/test_restart_Grid.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart/Grid
```

or

```
./run_framework_tests --re=framework/Samplers/Restart/Grid
```

- Test Description:
 - The essence of this test is to demonstrate the input space when generated from restart or from scratch are identical. The external models are organized so that outputs from the restart data have an output value of 1.0, and from the higher-fidelity sampler have an output value of 2.0. Obviously using different models with restarts is a terrible idea in general, but makes this test work. In the end, "fine.csv" and "restart.csv" should have identical input space, but different output space; all the output of "fine.csv" should be 2.0, while the restarted points in "restart.csv" should be 1.0

- Original Author:
 - talbpaul
- Creation date:
 - 2015-07-07
- The classes tested in this test are:
 - Samplers.Grid

2.3.409 FRAMEWORK SAMPLERS RESTART CSV

This test can be found at “. /raven/tests/framework/Samplers/Restart/test_restart_csv.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart/CSV
```

or

```
./run_framework_tests --re=framework/Samplers/Restart/CSV
```

- Test Description:
 - This test demonstrates that a restart can be performed from a loaded CSV file, not just an internal data object from an earlier step. As with the other restart tests, in output data objects samples from "course" have an output of 1, while samples from "fine" have an output of 2.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-07-27
- The classes tested in this test are:
 - Files

2.3.410 FRAMEWORK SAMPLERS RESTART LOADFROMLARGECSV

This test can be found at “. /raven/tests/framework/Samplers/Restart/load_from_csv.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart/LoadFromLargeCSV
```

or

```
./run_framework_tests --re=framework/Samplers/Restart/LoadFromLargeCSV
```

- Test Description:
 - At one point there was performance issues restarting from a large amount of data that is loaded from a CSV. This test exists to ensure loading from a large CSV behaves consistently.
- Original Author:
 - talbpaul

- Creation date:
 - 2016-06-30
- The classes tested in this test are:
 - Samplers.Grid

2.3.411 FRAMEWORK SAMPLERS RESTART TRUNCATED GRID

This test can be found at “./raven/tests/framework/Samplers/Restart/Truncated/grid.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart/Truncated/Grid
```

or

```
./run_framework_tests --re=framework/Samplers/Restart/Truncated/Grid
```

- Test Description:
 - This is similar to the restart tests in the parent directory, but in this one we test the use of the restartTolerance to recover restart points from a code that produces finite precision when reporting input values. As with the other restart tests, ”coarse” returns a 1 and ”fine” returns a 2.
- Original Author:
 - talbpaul
- Creation date:
 - 2016-04-05
- The classes tested in this test are:
 - Samplers.Grid

2.3.412 FRAMEWORK SAMPLERS RESTART TRUNCATED SPARSEGRIDCOLLOCATION

This test can be found at “./raven/tests/framework/Samplers/Restart/Truncated/sparse_grid_collocation.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart/Truncated/SparseGridCollocation
```

or

```
./run_framework_tests --re=framework/Samplers/Restart/Truncated/SparseGridCollocation
```

- Test Description:
 - This is similar to the restart tests in the parent directory, but in this one we test the use of the restartTolerance to recover restart points from a code that produces finite precision when reporting input values. As with the other restart tests, ”coarse” returns a 1 and ”fine” returns a 2.
- Original Author:
 - @talbpaul
- Creation date:
 - 2016-04-05
- The classes tested in this test are:
 - Samplers.SparseGridCollocation

2.3.413 FRAMEWORK SAMPLERS RESTART TRUNCATED SOBOL

This test can be found at “./raven/tests/framework/Samplers/Restart/Truncated/sobol.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart/Truncated/Sobol
```

or

```
./run_framework_tests --re=framework/Samplers/Restart/Truncated/Sobol
```

- Test Description:
 - This is similar to the restart tests in the parent directory, but in this one we test the use of the restartTolerance to recover restart points from a code that produces finite precision when reporting input values. As with the other restart tests, “coarse” returns a 1 and “fine” returns a 2.
- Original Author:
 - @talbpaul
- Creation date:
 - 2016-04-05
- The classes tested in this test are:
 - Samplers.Sobol

2.3.414 FRAMEWORK SAMPLERS RESTART TRUNCATED SCALED

This test can be found at “./raven/tests/framework/Samplers/Restart/Truncated/scale_test.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart/Truncated/Scaled
```

or

```
./run_framework_tests --re=framework/Samplers/Restart/Truncated/Scaled
```

- Test Description:
 - One challenge for the restartTolerance in restarting a sampler is finding a matching point in the restart data when the scale of the various inputs is wildly different. This test assures such a restart can be performed. See parent directory for how restarts are tested.
- Original Author:
 - @talbpaul
- Creation date:
 - 2016-10-26
- The classes tested in this test are:
 - Samplers

2.3.415 FRAMEWORK SAMPLERS SOBOLE SOBOLE

This test can be found at “. /raven/tests/framework/Samplers/Sobol/test_sobol_sampler.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Sobol/Sobol
```

or

```
./run_framework_tests --re=framework/Samplers/Sobol/Sobol
```

- Test Description:
 - This tests using the Sobol static sampler with the basic syntax.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-14
- The classes tested in this test are:
 - Samplers.Sobol

2.3.416 FRAMEWORK SAMPLERS SPARSEGRID SMOLYAKGRIDTEST

This test can be found at “. /raven/tests/framework/Samplers/SparseGrid/test_sparse_grid.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/SmolyakGridTest
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/SmolyakGridTest
```

- Test Description:
 - This tests using Smolyak-style SparseGridCollocation.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-07-07
- The classes tested in this test are:
 - Samplers.SparseGridCollocation

2.3.417 FRAMEWORK SAMPLERS SPARSEGRID TENSORGRIDTEST

This test can be found at “./raven/tests/framework/Samplers/SparseGrid/test_tensor_grid.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/TensorGridTest
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/TensorGridTest
```

- Test Description:
 - This tests using non-sparse tensor collocation.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-07-07
- The classes tested in this test are:
 - Samplers.SparseGridCollocation

2.3.418 FRAMEWORK SAMPLERS SPARSEGRID TENSORPRDUCTGRID

This test can be found at “./raven/tests/framework/Samplers/SparseGrid/test_index_TP.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/tensorPrductGrid
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/tensorPrductGrid
```

- Test Description:
 - This tests the creation of a TensorProduct construction sparse grid.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-11
- The classes tested in this test are:
 - IndexSets.TensorProduct

2.3.419 FRAMEWORK SAMPLERS SPARSEGRID TOTALDEGREEGRID

This test can be found at “./raven/tests/framework/Samplers/SparseGrid/test_index_TD.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/totalDegreeGrid
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/totalDegreeGrid
```

- Test Description:
 - This tests the creation of a TotalDegree construction sparse grid.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-11
- The classes tested in this test are:
 - IndexSets.TotalDegree

2.3.420 FRAMEWORK SAMPLERS SPARSEGRID HYPERBOLICCROSSGRID

This test can be found at “./raven/tests/framework/Samplers/SparseGrid/test_index_HC.xml”.
This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/hyperbolicCrossGrid
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/hyperbolicCrossGrid
```

- Test Description:
 - This tests the creation of a HyperbolicCross construction sparse grid.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-11
- The classes tested in this test are:
 - IndexSets.HyperbolicCross

2.3.421 FRAMEWORK SAMPLERS SPARSEGRID CUSTOMGRID

This test can be found at “./raven/tests/framework/Samplers/SparseGrid/test_index_custom.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/customGrid
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/customGrid
```

- Test Description:
 - This tests the creation of a Custom sparse grid.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-11
- The classes tested in this test are:
 - IndexSets.Custom

2.3.422 FRAMEWORK SAMPLERS SPARSEGRID ANISOTROPICGRID

This test can be found at “./raven/tests/framework/Samplers/SparseGrid/test_index_anisotropic.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/anisotropicGrid
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/anisotropicGrid
```

- Test Description:
 - This tests the creation of an anisotropic sparse grid (using the interpolation weights in the ROM).
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-11
- The classes tested in this test are:
 - IndexSets

2.3.423 FRAMEWORK SAMPLERS SPARSEGRID UNIFORM

This test can be found at “./raven/tests/framework/Samplers/SparseGrid/test_scgpc_uniform.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/uniform
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/uniform
```

- Test Description:
 - This tests using SparseGridCollocation with uniformly-distributed inputs.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-11
- The classes tested in this test are:
 - Samplers.SparseGridCollocation

2.3.424 FRAMEWORK SAMPLERS SPARSEGRID UNIFORM CC

This test can be found at “./raven/tests/framework/Samplers/SparseGrid/test_scgpc_uniform_cc.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/uniform_cc
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/uniform_cc
```

- Test Description:
 - This tests using SparseGridCollocation with Clenshaw Curtis points and weights (on uniformly-distributed variables).
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-11
- The classes tested in this test are:
 - Samplers.SparseGridCollocation

2.3.425 FRAMEWORK SAMPLERS SPARSEGRID NORMAL

This test can be found at “. /raven/tests/framework/Samplers/SparseGrid/test_scgpc_normal.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/normal
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/normal
```

- Test Description:
 - This tests using SparseGridCollocation with normally-distributed inputs.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-11
- The classes tested in this test are:
 - Samplers.SparseGridCollocation

2.3.426 FRAMEWORK SAMPLERS SPARSEGRID GAMMA

This test can be found at “. /raven/tests/framework/Samplers/SparseGrid/test_scgpc_gamma.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/gamma
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/gamma
```

- Test Description:
 - This tests using SparseGridCollocation with gamma-distributed inputs.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-11
- The classes tested in this test are:
 - Samplers.SparseGridCollocation

2.3.427 FRAMEWORK SAMPLERS SPARSEGRID BETA

This test can be found at “./raven/tests/framework/Samplers/SparseGrid/test_scgpc_beta.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/beta
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/beta
```

- Test Description:
 - This tests using SparseGridCollocation with beta-distributed inputs.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-11
- The classes tested in this test are:
 - Samplers.SparseGridCollocation

2.3.428 FRAMEWORK SAMPLERS SPARSEGRID BETANORM

This test can be found at “./raven/tests/framework/Samplers/SparseGrid/test_scgpc_betanorm.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/betanorm
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/betanorm
```

- Test Description:
 - This tests using SparseGridCollocation with truncated-normal-beta distributed inputs.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-11
- The classes tested in this test are:
 - Samplers.SparseGridCollocation

2.3.429 FRAMEWORK SAMPLERS SPARSEGRID TRIANG

This test can be found at “. /raven/tests/framework/Samplers/SparseGrid/test_scgpc_triang.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/triang
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/triang
```

- Test Description:
 - This tests using SparseGridCollocation with triangular-distributed inputs.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-11
- The classes tested in this test are:
 - Samplers.SparseGridCollocation

2.3.430 FRAMEWORK SAMPLERS SPARSEGRID EXPONENTIAL

This test can be found at “. /raven/tests/framework/Samplers/SparseGrid/test_scgpc_expon.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/exponential
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/exponential
```

- Test Description:
 - This tests using SparseGridCollocation with exponential-distributed inputs.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-09-11
- The classes tested in this test are:
 - Samplers.SparseGridCollocation

2.3.431 FRAMEWORK SAMPLERS SPARSEGRID ADAPTIVEONVARIANCE

This test can be found at “./raven/tests/framework/Samplers/SparseGrid/test_adaptive_stochpoly_var.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/AdaptiveOnVariance
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/AdaptiveOnVariance
```

- Test Description:
 - This tests the adaptive sparse grid with adaptive samples chosen and converged according to variance.
- Original Author:
 - talbpaul
- Creation date:
 - 2015-07-07
- The classes tested in this test are:
 - Samplers.AdaptiveSparseGrid

2.3.432 FRAMEWORK SINGLERUNS CODEMODEL

This test can be found at “./raven/tests/framework/SingleRuns/withCode.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/SingleRuns/codeModel
```

or

```
./run_framework_tests --re=framework/SingleRuns/codeModel
```

- Test Description:
 - This test assures the SingleRun works in conjunction with the Code model.
- Original Author:
 - talbpw
- Creation date:
 - 2017-02-02
- The classes tested in this test are:
 - Steps.SingleRun,Model.Code

2.3.433 FRAMEWORK SINGLERUNS EXTERNALMODELFAILS

This test can be found at “./raven/tests/framework/SingleRuns/withExternalModel.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/SingleRuns/externalModelFails
```

or

```
./run_framework_tests --re=framework/SingleRuns/externalModelFails
```

- Test Description:
 - This test assures the SingleRun produces the correct error when paired with the External model.
- Original Author:
 - talbpw
- Creation date:
 - 2017-01-27
- The classes tested in this test are:
 - Steps.SingleRun,Model.ExternalModel

2.3.434 FRAMEWORK SINGLERUNS ROMFAILS

This test can be found at “./raven/tests/framework/SingleRuns/withROM.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/SingleRuns/ROMFails
```

or

```
./run_framework_tests --re=framework/SingleRuns/ROMFails
```

- Test Description:
 - This test assures the SingleRun produces the correct error when paired with the ROM model.
- Original Author:
 - talbpw
- Creation date:
 - 2017-01-27
- The classes tested in this test are:
 - Steps.SingleRun,Model.ROM

2.3.435 FRAMEWORK SINGLERUNS POSTPROCESSORFAILS

This test can be found at “./raven/tests/framework/SingleRuns/withPP.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/SingleRuns/postProcessorFails
```

or

```
./run_framework_tests --re=framework/SingleRuns/postProcessorFails
```

- Test Description:
 - This test assures the SingleRun produces the correct error when paired with the PostProcessor model.
- Original Author:
 - talbpw
- Creation date:
 - 2017-01-27
- The classes tested in this test are:
 - Steps.SingleRun,Model.PostProcessor

2.3.436 FRAMEWORK SINGLERUNS DUMMYFAILS

This test can be found at “./raven/tests/framework/SingleRuns/withDummy.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/SingleRuns/dummyFails
```

or

```
./run_framework_tests --re=framework/SingleRuns/dummyFails
```

- Test Description:
 - This test assures the SingleRun produces the correct error when paired with the Dummy model.
- Original Author:
 - talbpw
- Creation date:
 - 2017-01-27
- The classes tested in this test are:
 - Steps.SingleRun,Model.Dummy

2.3.437 FRAMEWORK.TEST TRYCATCH

This test can be found at “./raven/tests/framework/TestedScripts/test_trycatch.py”. This test can be called executing the following command:

```
./run_tests --re=framework.test_trycatch
```

or

```
./run_framework_tests --re=framework.test_trycatch
```

- Test Description:
 - This test is aimed to perform Unit test on the MessageHandler It can not be considered as active part of the code but of the regression test system
- Original Author:
 - talbpaul
- Creation date:
 - 2016-02-26
- The classes tested in this test are:
 - MessageHandler

2.3.438 FRAMEWORK USER GUIDE ADAPTIVESAMPLINGSTRATEGIES LIMITSURFACESEARCH

This test can be found at “./raven/tests/framework/user_guide/AdaptiveSamplingStrategies/adaptiveSamplingLSsearch.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/AdaptiveSamplingStrategies/limitSurfaceSearch
```

or

```
./run_framework_tests --re=framework/user_guide/AdaptiveSamplingStrategies/limitSurfaceSearch
```

- Test Description:
 - This test is an example for the user guide to draw from. It demonstrates a typical workflow for using the LimitSurface capabilities of RAVEN (both the LimitSurfaceSearch sampler and the LimitSurfaceIntegral postprocessor).
- Original Author:
 - talbpw
- Creation date:
 - 2017-01-26
- The classes tested in this test are:
 - Samplers.LimitSurfaceSearch,PostProcessors.LimitSurfaceIntegral

2.3.439 FRAMEWORK USER GUIDE DATAMINING DATAMININGANALYSIS

This test can be found at “./raven/tests/framework/user_guide/DataMining/dataMiningAnalysis.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/DataMining/dataMiningAnalysis
```

or

```
./run_framework_tests --re=framework/user_guide/DataMining/dataMiningAnalysis
```

- Test Description:
 - This test is an example for the user guide to draw from. It demonstrates a typical workflow for sampling then making use of the DataMining postprocessor.
- Original Author:
 - talbpw
- Creation date:
 - 2017-01-30
- The classes tested in this test are:
 - PostProcessor.DataMining

2.3.440 FRAMEWORK USER GUIDE FORWARDSAMPLINGSTRATEGIES MONTECARLO

This test can be found at “./raven/tests/framework/user_guide/ForwardSamplingStrategies/forwardSamplingMontecarlo.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ForwardSamplingStrategies/MonteCarlo
```

or

```
./run_framework_tests --re=framework/user_guide/ForwardSamplingStrategies/MonteCarlo
```

- Test Description:
 - This test is an example for the user guide to draw from. It demonstrates typical usage of the MonteCarlo sampler to sample a Code model.
- Original Author:
 - talbpw
- Creation date:
 - 2017-01-26
- The classes tested in this test are:
 - Samplers.MonteCarlo

2.3.441 FRAMEWORK USER GUIDE FORWARDSAMPLINGSTRATEGIES GRID

This test can be found at “./raven/tests/framework/user_guide/ForwardSamplingStrategies/forwardSamplingGrid.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ForwardSamplingStrategies/Grid
```

or

```
./run_framework_tests --re=framework/user_guide/ForwardSamplingStrategies/Grid
```

- Test Description:
 - This test is an example for the user guide to draw from. It demonstrates typical usage of the Grid sampler to sample a Code model.
- Original Author:
 - talbpw
- Creation date:
 - 2017-01-26
- The classes tested in this test are:
 - Samplers.Grid

2.3.442 FRAMEWORK USER GUIDE FORWARDSAMPLINGSTRATEGIES STRATIFIED

This test can be found at “./raven/tests/framework/user_guide/ForwardSamplingStrategies/forwardSamplingStratified.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ForwardSamplingStrategies/Stratified
```

or

```
./run_framework_tests --re=framework/user_guide/ForwardSamplingStrategies/Stratified
```

- Test Description:
 - This test is an example for the user guide to draw from. It exemplifies using the Stratified sampler on a Code model (the Analytic Bateman in this case).
- Original Author:
 - talbpw
- Creation date:
 - 2017-01-26
- The classes tested in this test are:
 - Samplers.Stratified

2.3.443 FRAMEWORK USER GUIDE FORWARDSAMPLINGSTRATEGIES SPARSEGRID

This test can be found at “./raven/tests/framework/user_guide/ForwardSamplingStrategies/forwardSamplingSparseGrid.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ForwardSamplingStrategies/SparseGrid
```

or

```
./run_framework_tests --re=framework/user_guide/ForwardSamplingStrategies/SparseGrid
```

- Test Description:
 - This test is an example for the user guide to draw from. It typifies a workflow for using the SparseGrid sampler, and constructing a corresponding ROM.
- Original Author:
 - talbpw
- Creation date:
 - 2017-01-26
- The classes tested in this test are:
 - Samplers.SparseGrid

2.3.444 FRAMEWORK USER GUIDE RAVENTUTORIAL SINGLERUN

This test can be found at “./raven/tests/framework/user_guide/ravenTutorial/singleRun.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ravenTutorial/singleRun
```

or

```
./run_framework_tests --re=framework/user_guide/ravenTutorial/singleRun
```

- Test Description:
 - This test is an example for the user guide to draw from. It demonstrates typical usage of SingleRun.
- Original Author:
 - wangc
- Creation date:
 - 2017-07-24
- The classes tested in this test are:
 - Models.Code

2.3.445 FRAMEWORK USER GUIDE SINGLERUNPLOT

This test can be found at “. /raven/tests/framework/user_guide/ravenTutorial/singleRunPlotAndPrint.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/singleRunPlot
```

or

```
./run_framework_tests --re=framework/user_guide/singleRunPlot
```

- Test Description:
 - This test is an example for the user guide to draw from. It demonstrates a streamlined workflow of using the SingleRun step to take a single sample, then plot and print the results.
- Original Author:
 - wangc
- Creation date:
 - 2017-07-28
- The classes tested in this test are:
 - Steps.SingleRun

2.3.446 FRAMEWORK USER GUIDE SINGLERUNSUBPLOT

This test can be found at “. /raven/tests/framework/user_guide/ravenTutorial/singleRunSubPlotsAndSelected.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/singleRunSubPlot
```

or

```
./run_framework_tests --re=framework/user_guide/singleRunSubPlot
```

- Test Description:
 - This test is an example for the user guide to draw from. This advances the simplest SingleRun example by selectively printing and plotting only parts of the data.
- Original Author:
 - wangc
- Creation date:
 - 2017-07-28
- The classes tested in this test are:
 - Steps.SingleRun,OutStreams.Print

2.3.447 FRAMEWORK USER GUIDE RAVENTUTORIAL MONTECARLO

This test can be found at “./raven/tests/framework/user_guide/ravenTutorial/MonteCarlo.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ravenTutorial/MonteCarlo
```

or

```
./run_framework_tests --re=framework/user_guide/ravenTutorial/MonteCarlo
```

- Test Description:
 - This test is an example for the user guide to draw from. It demonstrates typical usage of the MultiRun with Monte Carlo sampler.
- Original Author:
 - wangc
- Creation date:
 - 2017-07-24
- The classes tested in this test are:
 - Samplers.MonteCarlo

2.3.448 FRAMEWORK USER GUIDE RAVENTUTORIAL ROMTRAIN

This test can be found at “./raven/tests/framework/user_guide/ravenTutorial/RomTrain.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ravenTutorial/RomTrain
```

or

```
./run_framework_tests --re=framework/user_guide/ravenTutorial/RomTrain
```

- Test Description:
 - This test is an example for the user guide to draw from. It demonstrates the workflow for obtaining samples, then constructing the ROM and dumping the ROM .
- Original Author:
 - wangc
- Creation date:
 - 2017-07-26
- The classes tested in this test are:
 - Models.ROM

2.3.449 FRAMEWORK USER GUIDE RAVENTUTORIAL ROMLOAD

This test can be found at “./raven/tests/framework/user_guide/ravenTutorial/RomLoad.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ravenTutorial/RomLoad
```

or

```
./run_framework_tests --re=framework/user_guide/ravenTutorial/RomLoad
```

- Test Description:
 - This test is an example for the user guide to draw from. It demonstrates the workflow for loading and sampling ROM.
- Original Author:
 - wangc
- Creation date:
 - 2017-07-26
- The classes tested in this test are:
 - Models.ROM

2.3.450 FRAMEWORK USER GUIDE RAVENTUTORIAL POSTPROCESS

This test can be found at “./raven/tests/framework/user_guide/ravenTutorial/PostProcess.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ravenTutorial/PostProcess
```

or

```
./run_framework_tests --re=framework/user_guide/ravenTutorial/PostProcess
```

- Test Description:
 - This test is an example for the user guide to draw from. It performs basic statistics on data taken from the analytic bateman model, and demonstrates a typical workflow for using the PostProcess step.
- Original Author:
 - wangc
- Creation date:
 - 2017-07-27
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.451 FRAMEWORK USER GUIDE REDUCEDORDERMODELLING ROMCONSTRUCTION

This test can be found at “./raven/tests/framework/user_guide/ReducedOrderModeling/reducedOrderModeling.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ReducedOrderModelling/ROMConstruction
```

or

```
./run_framework_tests --re=framework/user_guide/ReducedOrderModelling/ROMConstruction
```

- Test Description:
 - This test is an example for the user guide to draw from. It demonstrates the workflow for obtaining samples, then constructing both ScitKitLearn and NDinvDistWeight reduced-order models.
- Original Author:
 - talbpw
- Creation date:
 - 2017-01-27
- The classes tested in this test are:
 - Models.ROM

2.3.452 FRAMEWORK USER GUIDE STATISTICALANALYSIS STATISTICALANALYSIS

This test can be found at “./raven/tests/framework/user_guide/StatisticalAnalysis/statisticalAnalysis.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/StatisticalAnalysis/StatisticalAnalysis
```

or

```
./run_framework_tests --re=framework/user_guide/StatisticalAnalysis/StatisticalAnalysis
```

- Test Description:
 - This test is an example for the user guide to draw from. It performs basic statistics on data taken from the analytic bateman model, and demonstrates a typical workflow for using the basic statistics postprocessor.
- Original Author:
 - talbpw
- Creation date:
 - 2017-01-27
- The classes tested in this test are:
 - PostProcessors.BasicStatistics

2.3.453 FRAMEWORK.MATHUTILS

This test can be found at “./raven/tests/framework/Utils/testMathUtils.py”. This test can be called executing the following command:

```
./run_tests --re=framework.mathUtils
```

or

```
./run_framework_tests --re=framework.mathUtils
```

- Test Description:
 - This test performs Unit Tests for the mathUtils methods It cannot be considered part of the active code but of the regression test system
- Original Author:
 - talbpaul
- Creation date:
 - 2016-11-01
- The classes tested in this test are:
 - utils.mathUtils
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-11-08
 - description: Relocated utils tests
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.454 FRAMEWORK.RANDOMUTILS

This test can be found at “./raven/tests/framework/Utils/testRandomUtils.py”. This test can be called executing the following command:

```
./run_tests --re=framework.randomUtils
```

or

```
./run_framework_tests --re=framework.randomUtils
```

- Test Description:
 - This test performs Unit Tests for the randomUtils methods
- Original Author:
 - talbpaul

- Creation date:
 - 2017-06-16
- The classes tested in this test are:
 - `utils.randomUtils`

2.3.455 **FRAMEWORK.XMLUTILS**

This test can be found at “`./raven/tests/framework/Utils/testXmlUtils.py`”. This test can be called executing the following command:

```
./run_tests --re=framework.xmlUtils
```

or

```
./run_framework_tests --re=framework.xmlUtils
```

- Test Description:
 - This test performs Unit Tests for the `xmlUtils` class It cannot be considered part of the active code but of the regression test system
- Original Author:
 - talbpaul
- Creation date:
 - 2016-11-01
- The classes tested in this test are:
 - `utils.xmlUtils`
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-11-08
 - description: Relocated utils tests
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.456 **FRAMEWORK.CACHEDNDARRAY**

This test can be found at “`./raven/tests/framework/Utils/testCachedNDArray.py`”. This test can be called executing the following command:

```
./run_tests --re=framework.cachedNDArray
```

or

```
./run_framework_tests --re=framework.cachedNDArray
```

- Test Description:
 - This test performs Unit Tests for the `cached_ndarray` module It cannot be considered part of the active code but of the regression test system
- Original Author:
 - talbpaul
- Creation date:
 - 2016-11-01
- The classes tested in this test are:
 - `utils.cachedNDArray`
- Since the creation of this test, the following main revisions have been performed:
 1. revision info:
 - author : talbpaul
 - date : 2016-11-08
 - description: Relocated utils tests
 2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.457 FRAMEWORK.TREESTRUCTURE

This test can be found at “`./raven/tests/framework/utils/testTreeStructure.py`”. This test can be called executing the following command:

```
./run_tests --re=framework.treeStructure
```

or

```
./run_framework_tests --re=framework.treeStructure
```

- Test Description:
 - This test performs Unit Tests for the `TreeStructure` classes It cannot be considered part of the active code but of the regression test system
- Original Author:
 - talbpaul
- Creation date:
 - 2016-11-01
- The classes tested in this test are:
 - `utils.TreeStructure`
- Since the creation of this test, the following main revisions have been performed:

1. revision info:
 - author : talbpaul
 - date : 2016-11-08
 - description: Relocated utils tests
2. revision info:
 - author : alfoa
 - date : 2017-01-21
 - description: Adding this test description.

2.3.458 FRAMEWORK VARIABLEGROUPS SETOPERATIONS

This test can be found at “./raven/tests/framework/VariableGroups/sets.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/VariableGroups/SetOperations
```

or

```
./run_framework_tests --re=framework/VariableGroups/SetOperations
```

- Test Description:
 - tests set operations and data objects for using variable groups
- Original Author:
 - talbpaul
- Creation date:
 - 2016-02-08
- The classes tested in this test are:
 - VariableGroups

2.3.459 FRAMEWORK VARIABLEGROUPS ROM

This test can be found at “./raven/tests/framework/VariableGroups/rom.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/VariableGroups/ROM
```

or

```
./run_framework_tests --re=framework/VariableGroups/ROM
```

- Test Description:
 - tests variable groups when used as part of a ROM or external model
- Original Author:
 - talbpaul
- Creation date:
 - 2016-02-08
- The classes tested in this test are:
 - VariableGroups

2.3.460 FRAMEWORK VARIABLEGROUPS EXTERNALNODES

This test can be found at “./raven/tests/framework/VariableGroups/extnodes.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/VariableGroups/ExternalNodes
```

or

```
./run_framework_tests --re=framework/VariableGroups/ExternalNodes
```

- Test Description:
 - tests variable groups used in external XML
- Original Author:
 - talbpaul
- Creation date:
 - 2016-02-08
- The classes tested in this test are:
 - VariableGroups

2.3.461 FRAMEWORK VARIABLEGROUPS ORDEREDVARIABLES

This test can be found at “./raven/tests/framework/VariableGroups/ordered.xml”. This test can be called executing the following command:

```
./run_tests --re=framework/VariableGroups/OrderedVariables
```

or

```
./run_framework_tests --re=framework/VariableGroups/OrderedVariables
```

- Test Description:
 - tests order preservation of variables in variable groups
- Original Author:
 - talbpaul
- Creation date:
 - 2016-02-08
- The classes tested in this test are:
 - VariableGroups

3 Undocumented tests

Currently, There are 28 undocumented tests:

1. **Folder:** /Users/alfoa/projects/raven_github/raven/tests/crow. **Tests:**
 - ./raven/tests/crow/test_import.py
 - ./raven/tests/crow/test_utils.py
 - ./raven/tests/crow/test_normal.py
 - ./raven/tests/crow/test_laplace.py
 - ./raven/tests/crow/test_geometric.py
 - ./raven/tests/crow/test_eigen_svd.py
 - ./raven/tests/crow/test_reduction.py
 - ./raven/tests/crow/test_pca_index.py
 - ./raven/tests/crow/test_mvn_pca.py
 - ./raven/tests/crow/test_inverseMarginalForPCA.py
 - ./raven/tests/crow/test_cellProbabilityWeight.py
 - ./raven/tests/crow/test_marginalCdfForPCA.py
 - ./raven/tests/crow/test_transformationMatrix.py
 - ./raven/tests/crow/test_svd_index.py
 - ./raven/tests/crow/test_transformationMatrix_index.py
 - ./raven/tests/crow/test_inverse_transformation_matrix.py
 - ./raven/tests/crow/test_symmetric_psd.py
2. **Folder:** /Users/alfoa/projects/raven_github/raven/tests/framework/TestXSD. **Tests:**
 - ./raven/tests/framework/TestXSD/TestStrictCheck.py
3. **Folder:** /Users/alfoa/projects/raven_github/raven/tests/framework/ErrorChecks. **Tests:**
 - ./raven/tests/framework/ErrorChecks/loadBadHistory.xml
 - ./raven/tests/framework/ErrorChecks/loadBadPointSet.xml
 - ./raven/tests/framework/ErrorChecks/badInSimulation.xml
 - ./raven/tests/framework/ErrorChecks/unsyncedTypicalHistory.xml
4. **Folder:** /Users/alfoa/projects/raven_github/raven/tests/framework/OutStreams. **Tests:**
 - ./raven/tests/framework/OutStreams/test_legend.xml
5. **Folder:** /Users/alfoa/projects/raven_github/raven/tests/framework/PostProcessors/BasicStatistics. **Tests:**
 - ./raven/tests/framework/PostProcessors/BasicStatistics/test_timedep_out_csv.xml
6. **Folder:** /Users/alfoa/projects/raven_github/raven/tests/framework/PostProcessors/InterfacedPostProcessor. **Tests:**
 - ./raven/tests/framework/PostProcessors/InterfacedPostProcessor/test_metadata_usage_in_interfacePP.xml

7. **Folder:** /Users/alfoa/projects/raven_github/raven/tests/framework/PostProcessors/Metrics. **Tests:**

- ./raven/tests/framework/PostProcessors/Metrics/unit_test_comparison_statistics.py

8. **Folder:** /Users/alfoa/projects/raven_github/raven/tests/framework/Utils. **Tests:**

- ./raven/tests/framework/Utils/testUtils.py
- ./raven/tests/framework/Utils/testParse.py