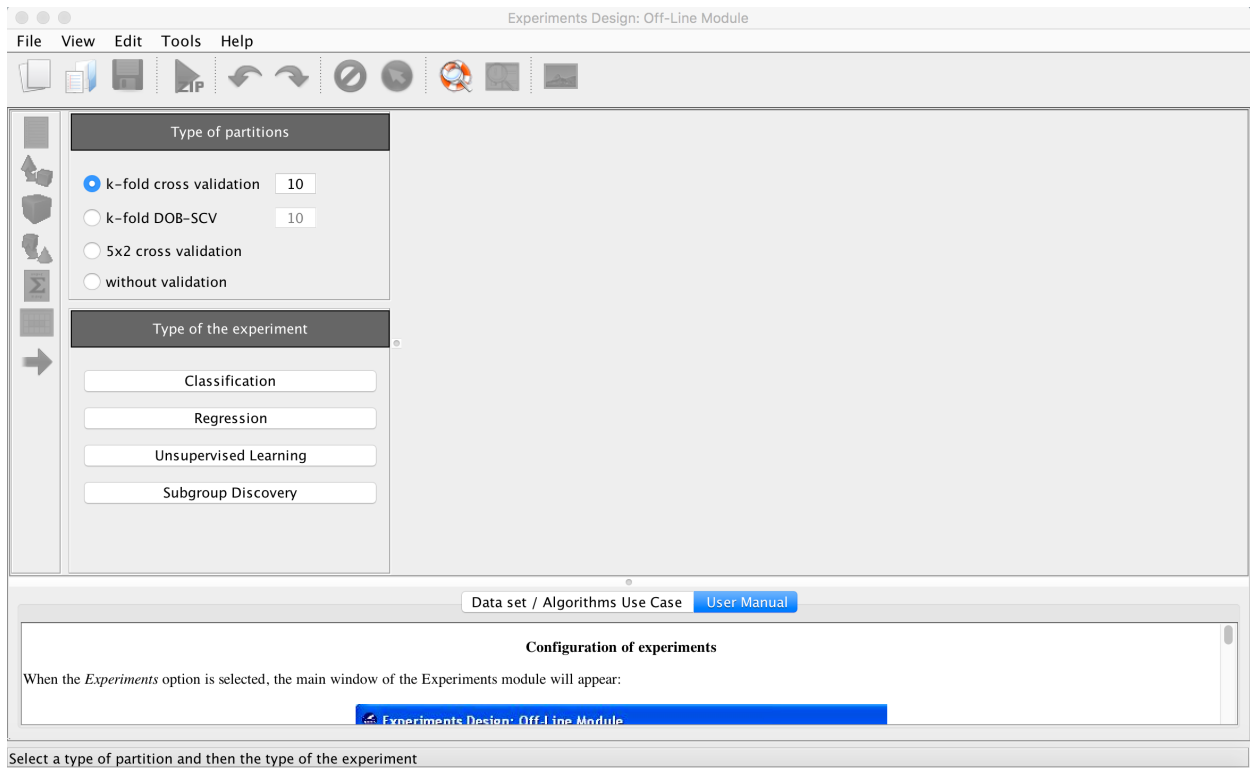


## HOW TO USE KEEL

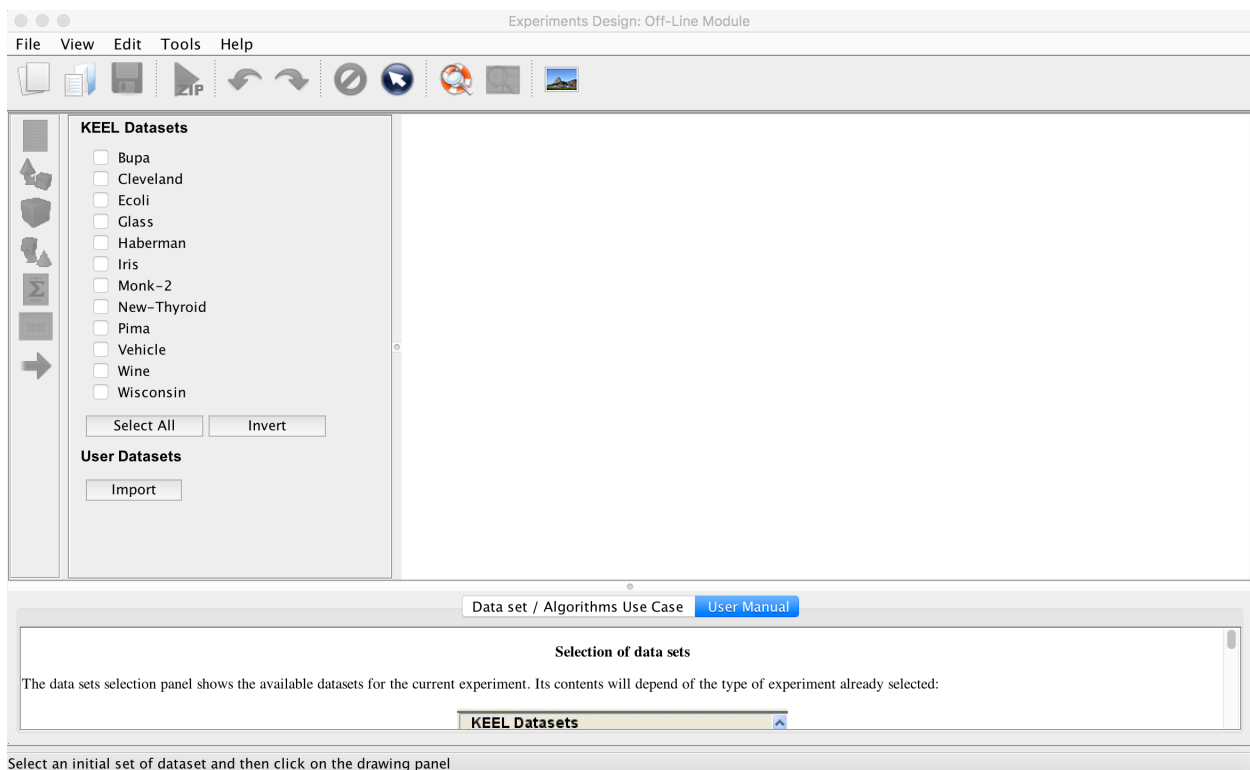
- Download KEEL from <http://keel.es/>
- Unzip the file and run KEEL.



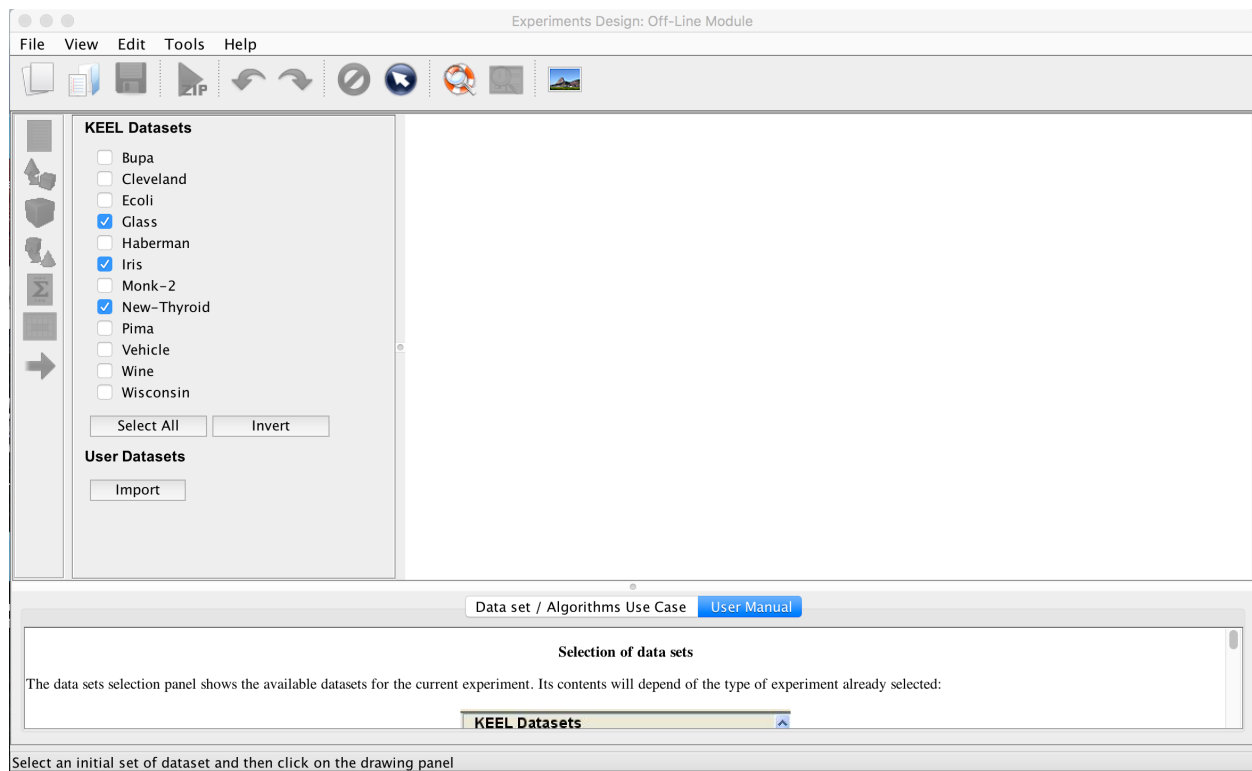
- In order to make a new experiment, click on **Experiments**.



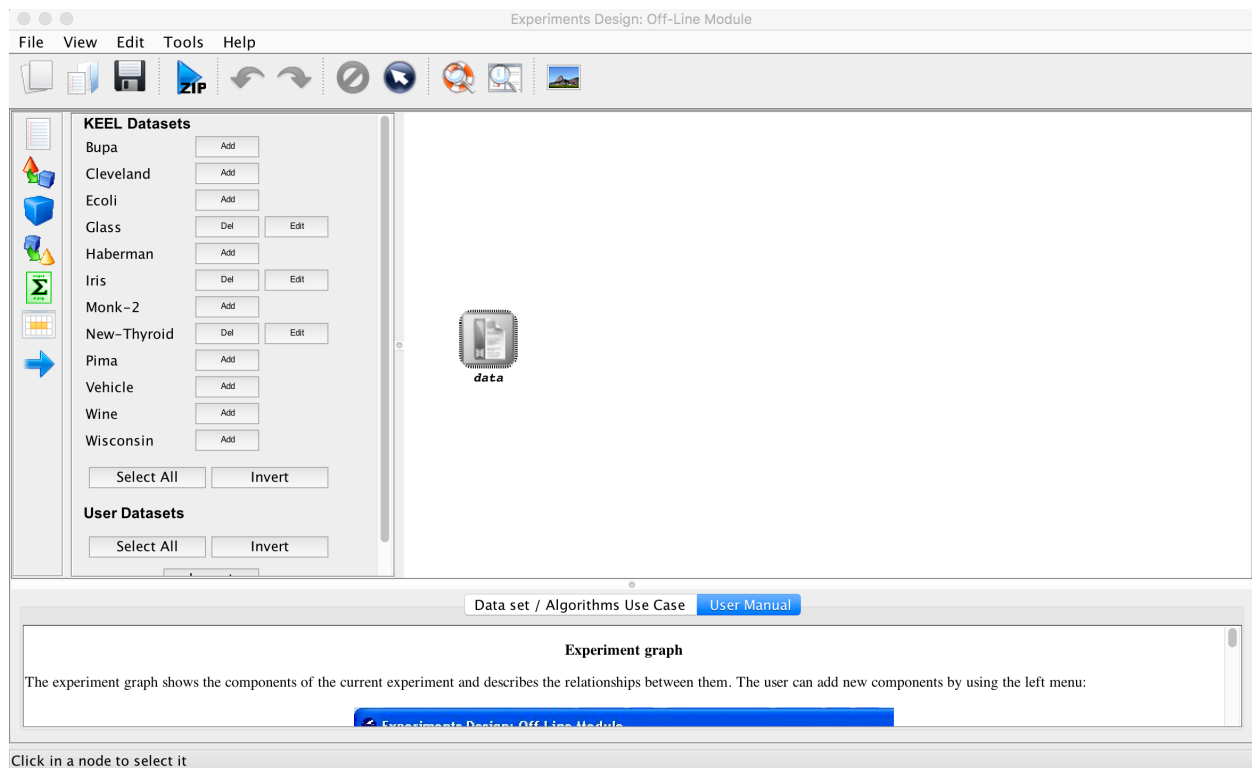
- Then click on **Classification**.



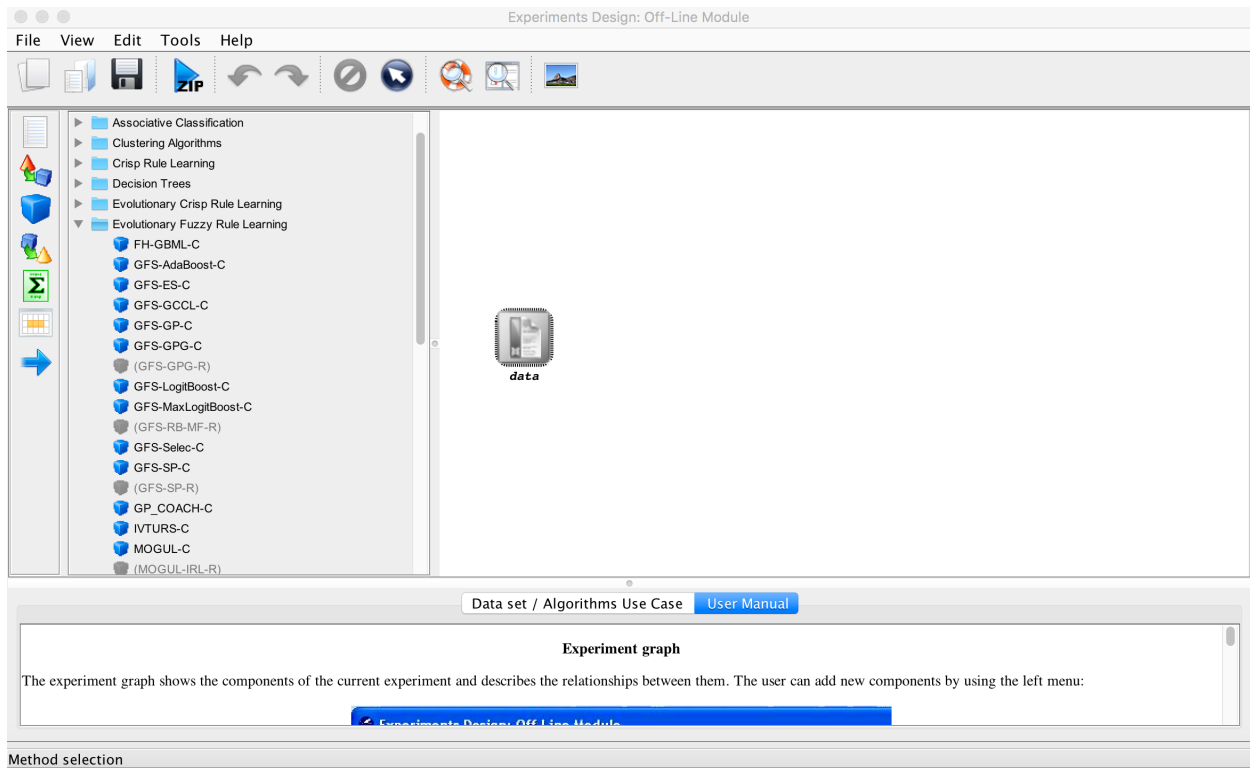
- Now, select the datasets that are going to be used in the experiment.



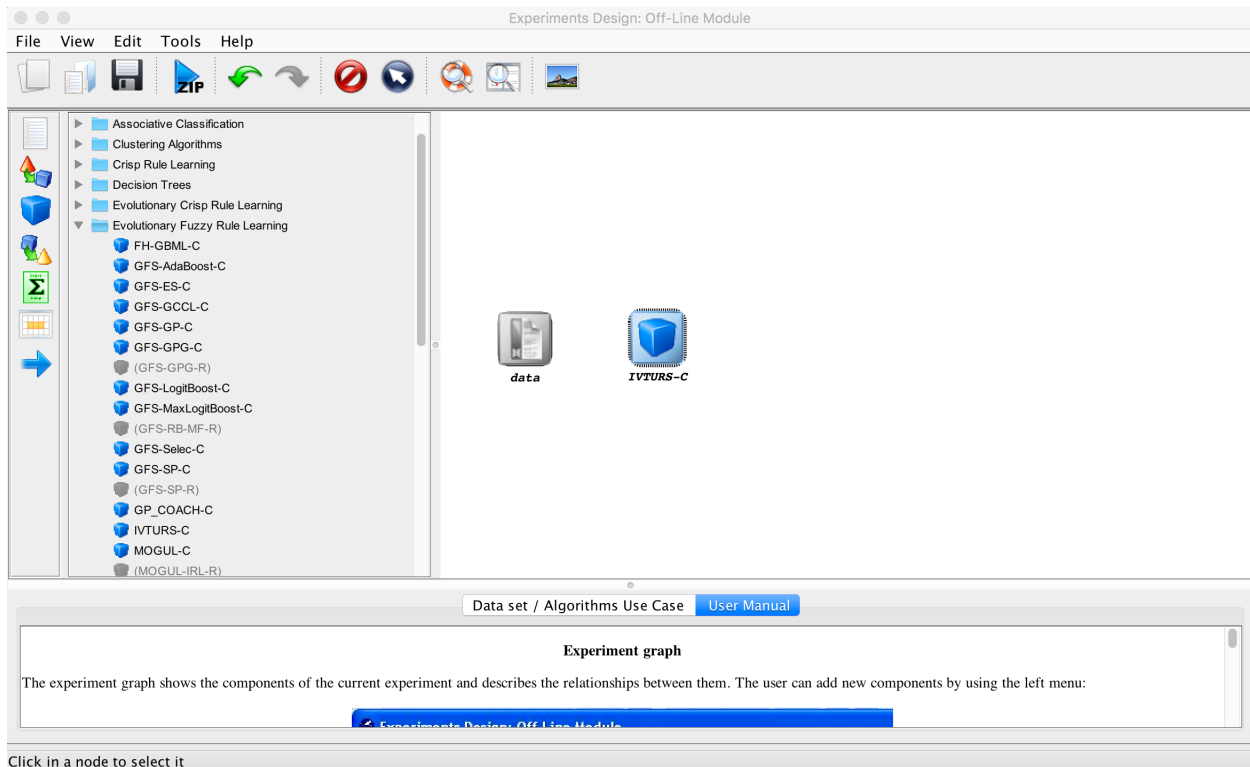
- Once you have finished the selection, place the mouse in the empty space on the right and just click on it.



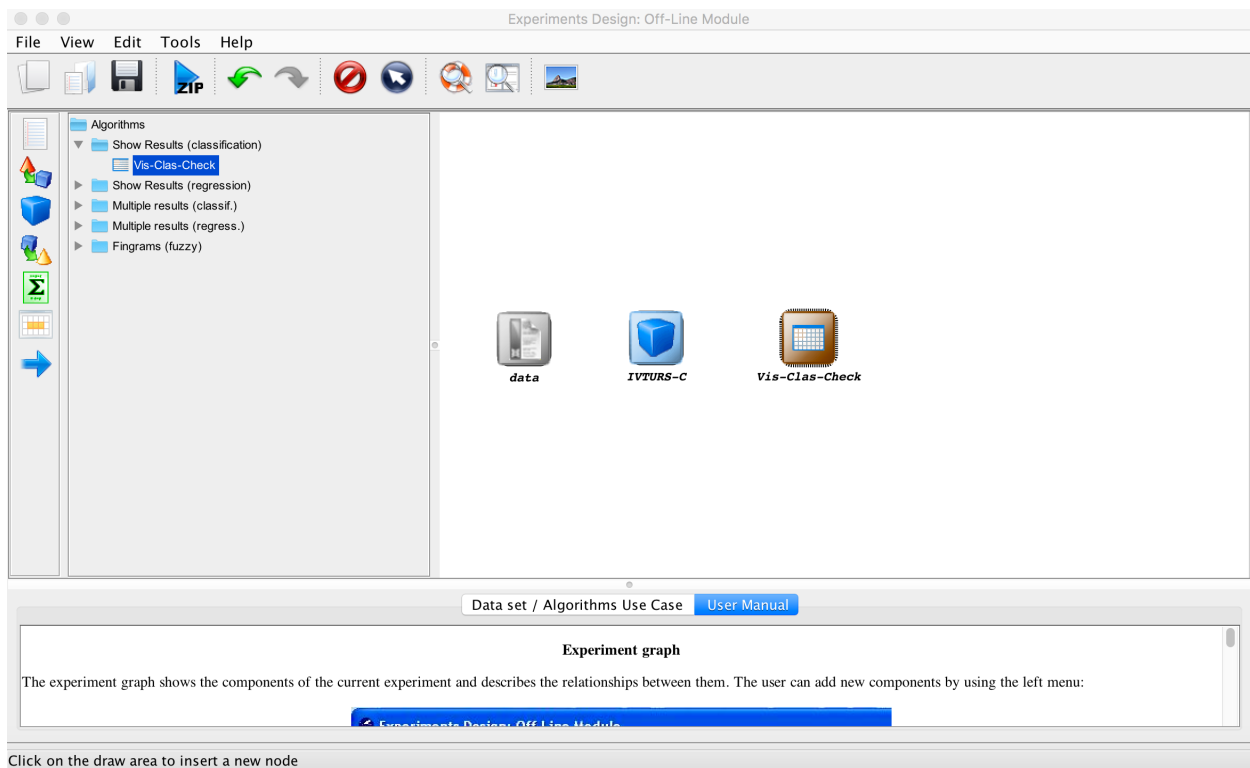
- Click on the third icon on the left list and select the algorithm you want to use for the particular experiment.



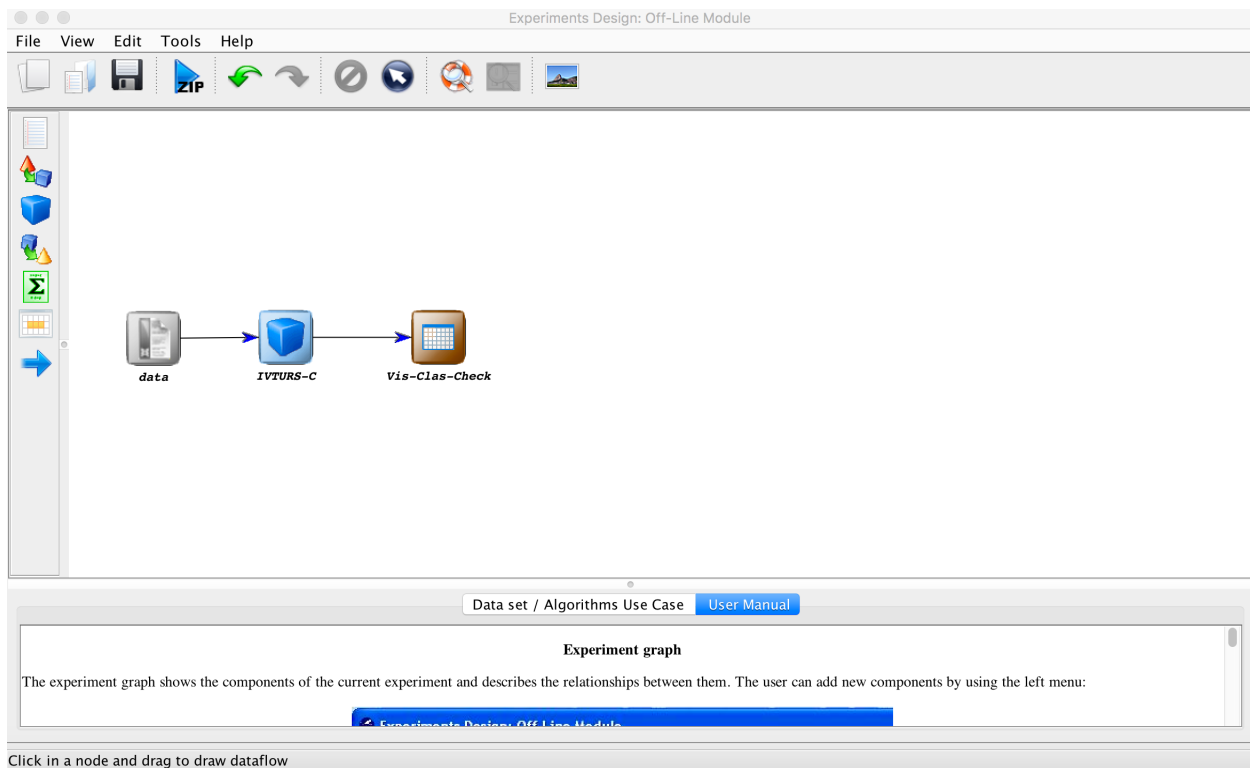
- Again, click in the space on the right.



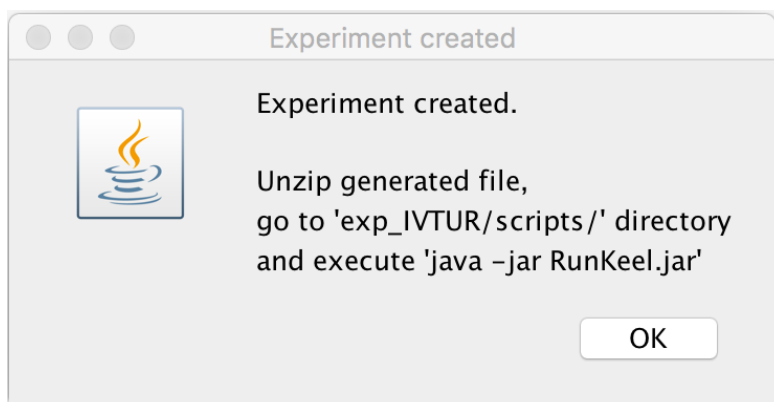
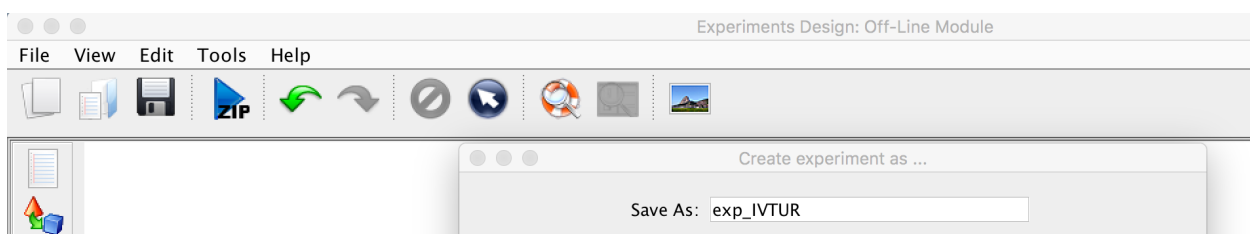
- Click on the sixth icon on the left, select **Vis-Clas-Check** and repeat the previous action.



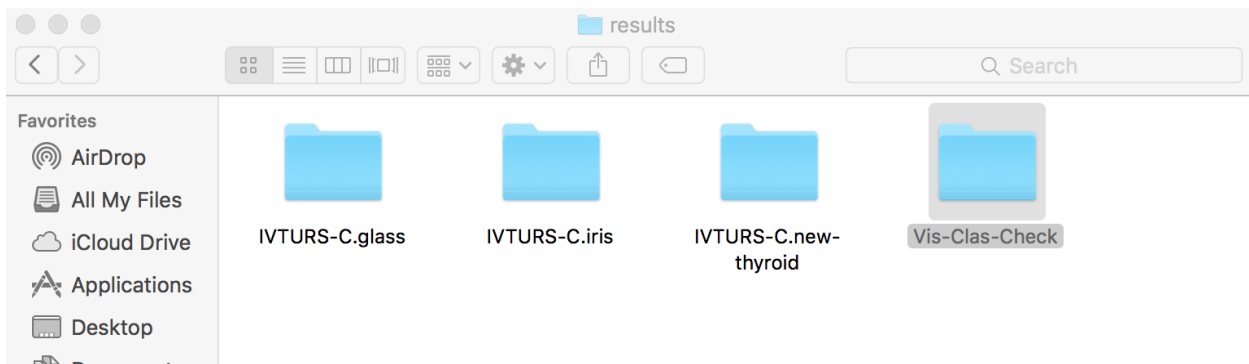
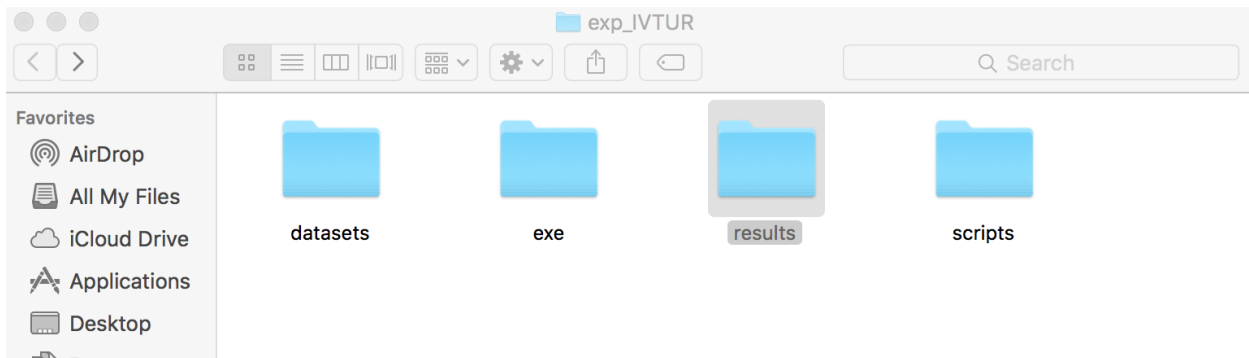
- Now, join all modules in the space on the right by clicking the last icon on the left.



- The last step is to create the experiment. To do that, just click the icon placed in the top menu (says **ZIP**). Save the file and follow the instructions given by the message.



- Once the experiment has finished, the results will be stored inside folder **results** → **Vis-Clas-Check** (in your experiment folder).



- To proceed with the statistical analysis (first you need to collect all the results in a .csv file – one file for each parameter considered), go to the main menu and select **Modules** → **Non-Parametric Statistical Analysis**.





KEEL Suite for Statistical Analysis

**Statistical procedures**

☒ Friedman test 1xN
 ☐ Friedman test NxN
 ☐ Quade test 1xN
 ☐ Contrast estimation
 ☐ Friedman Aligned test 1xN
 ☐ Wilcoxon test 1x1

**Post hoc methods**

☐ Iman-Davenport
 ☐ Hommel
 ☐ Li
 ☐ Bonferroni-Dunn
 ☐ Holland
 ☐ Nemenyi
 ☐ Holm
 ☐ Rom
 ☐ Shaffer
 ☐ Hochberg
 ☐ Finner
 ☐ Bergman

**Performance measure**

☒ Maximize
 ☐ Minimize

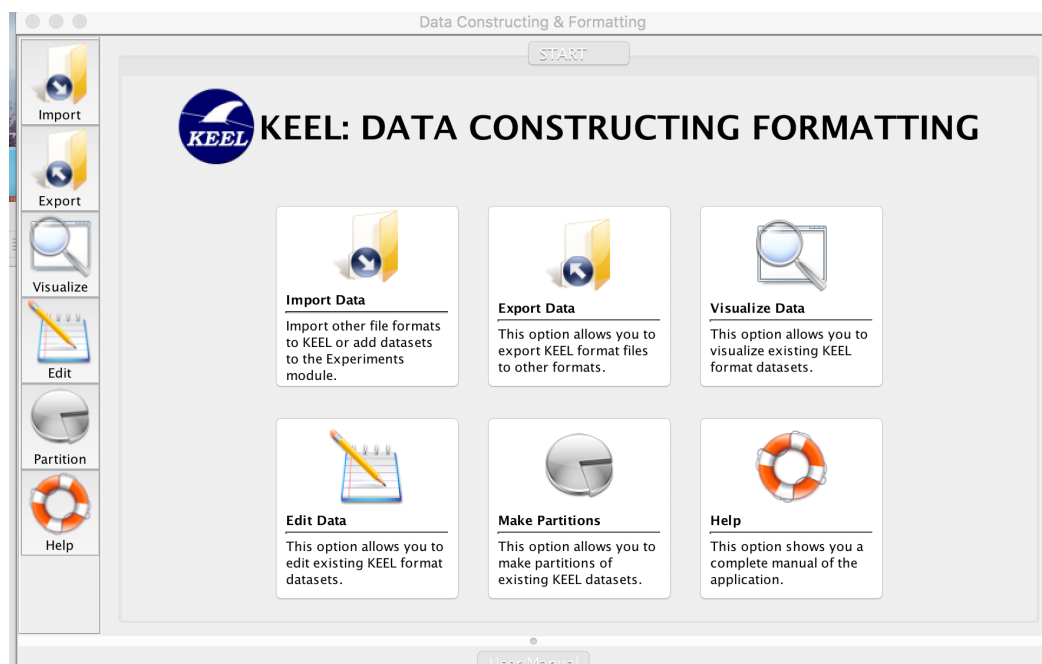
Methods: 
 Data sets:

Data sets	Algorithm 1	Algorithm 2	Algorithm 3	Algorithm 4
Data set 1	0.0	0.0	0.0	0.0
Data set 2	0.0	0.0	0.0	0.0
Data set 3	0.0	0.0	0.0	0.0
Data set 4	0.0	0.0	0.0	0.0
Data set 5	0.0	0.0	0.0	0.0
Data set 6	0.0	0.0	0.0	0.0
Data set 7	0.0	0.0	0.0	0.0
Data set 8	0.0	0.0	0.0	0.0
Data set 9	0.0	0.0	0.0	0.0
Data set 10	0.0	0.0	0.0	0.0

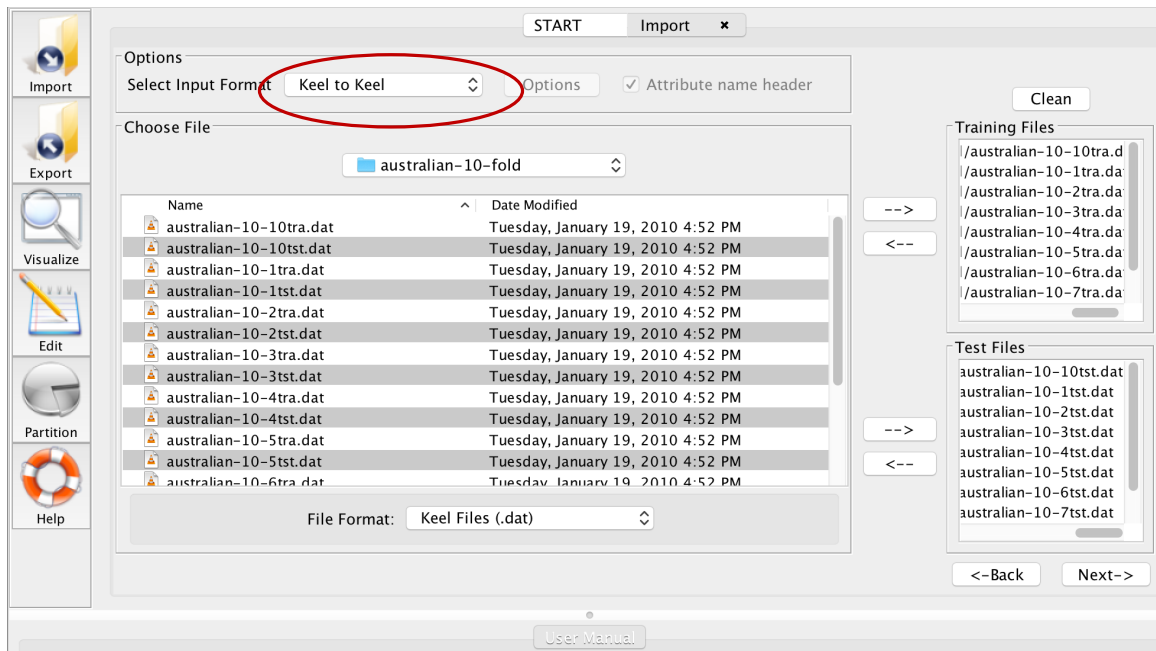
- To add new datasets to the tool, follow the sequence of steps below:
  - Go to **KEEL-dataset repository** in keel.es
  - Scroll down a little bit and click on Supervised Classification – Standard classification datasets.
  - Click on the zip icon (the one that says 10-fcv), associated with the dataset that you want to download.
  - Unzip the file.
  - Then, run KEEL and proceed as follows.



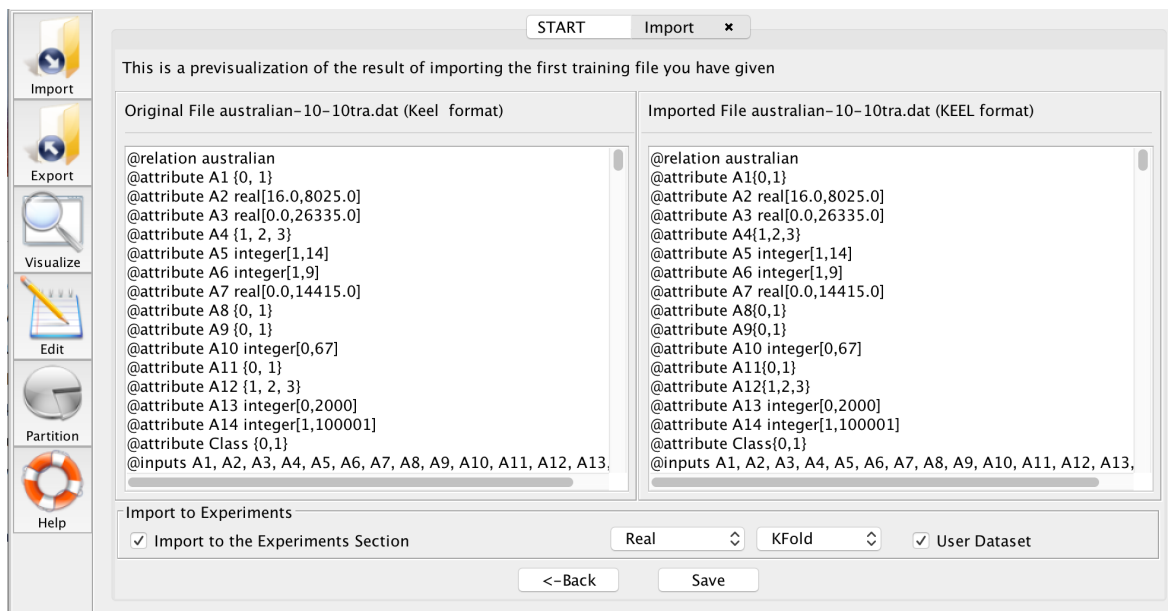
- Click on **Data Management**



- **Import Data – Import Partitions**



- Ensure that Input Format is **Keel to Keel**.
- Add the partitions to “Training Files” and “Test Files”. Then click **Next**.



- **Save**