Constant

Predict the most frequent class or mean value from the training set.

Inputs

- Data: input dataset
- Preprocessor: preprocessing method(s)

Outputs

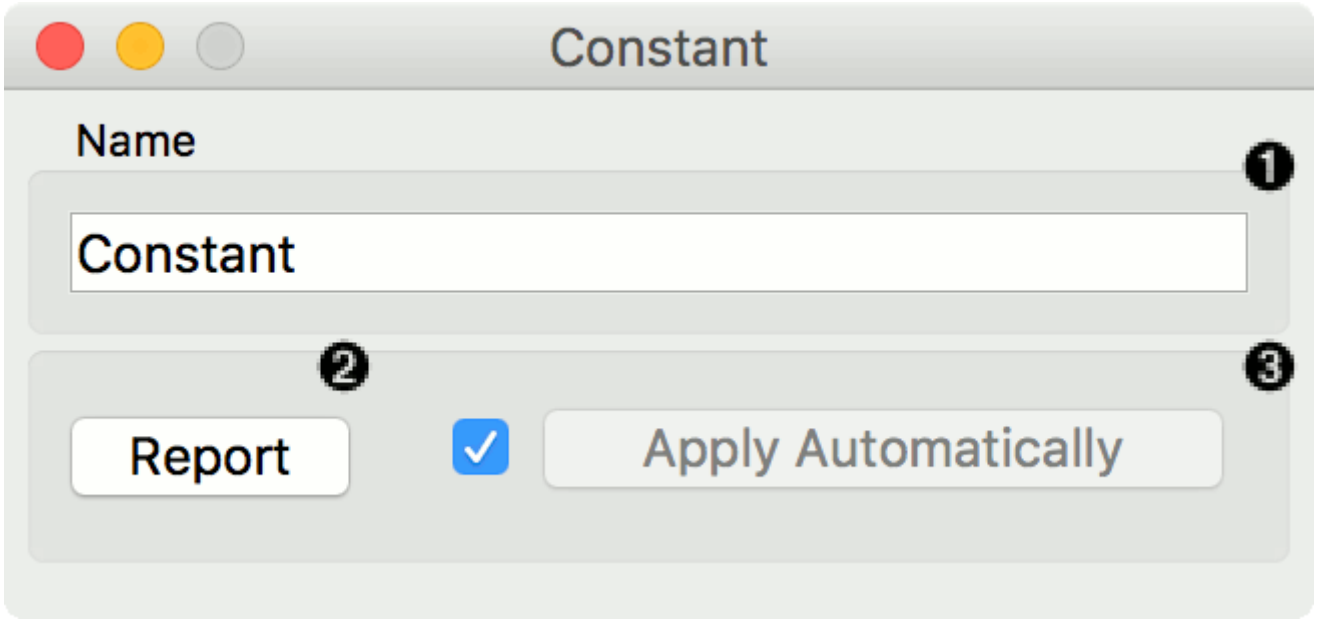
- Learner: majority/mean learning algorithm
- Model: trained model

This learner produces a model that always predicts themajority for classification tasks and mean value for regression tasks.

For classification, when predicting the class value with Predictions, the widget will return relative frequencies of the classes in the training set. When there are two or more majority classes, the classifier chooses the predicted class randomly, but always returns the same class for a particular example.

For regression, it *learns* the mean of the class variable and returns a predictor with the same mean value.

The widget is typically used as a baseline for other models.



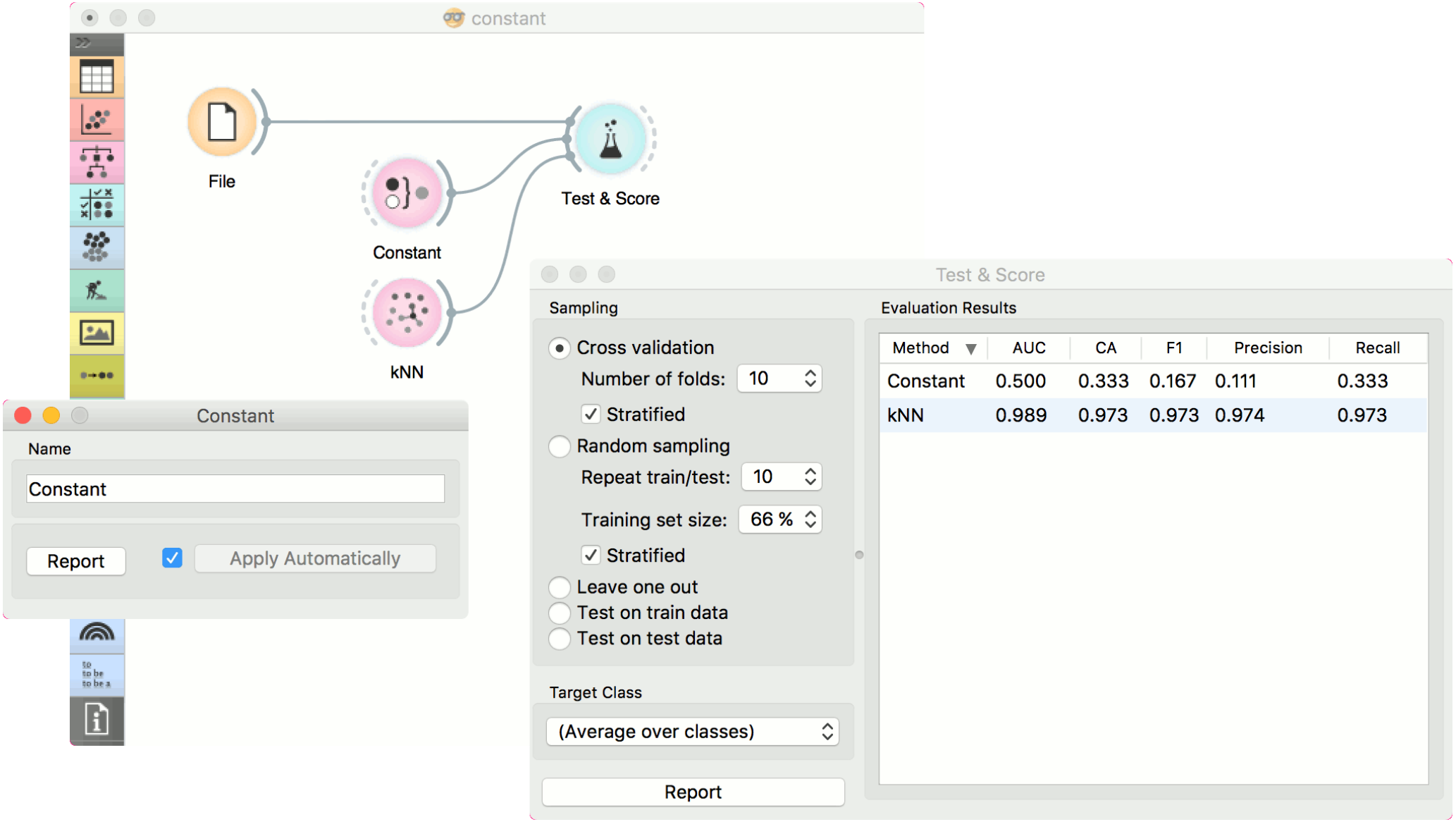
This widget provides the user with two options:

1. The name under which it will appear in other widgets. Default name is “Constant”.
2. Produce a report.

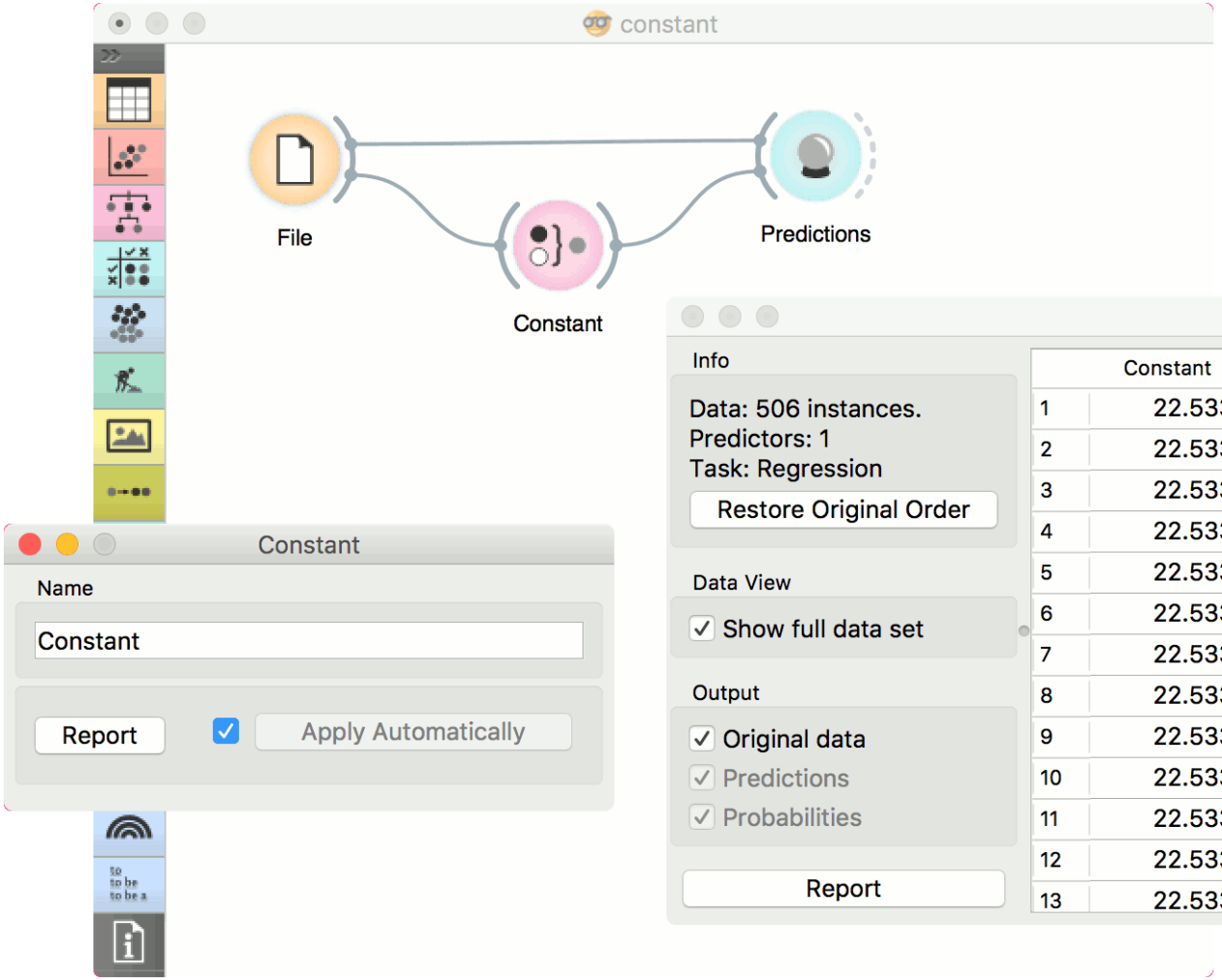
If you change the widget’s name, you need to click *Apply*. Alternatively, tick the box on the left side and changes will be communicated automatically.

Examples

In a typical classification example, we would use this widget to compare the scores of other learning algorithms (such as kNN) with the default scores. Use *iris* dataset and connect it to Test & Score. Then connect **Constant** and kNN to Test & Score and observe how well kNN performs against a constant baseline.



For regression, we use **Constant** to construct a predictor in Predictions. We used the *housing* dataset. In **Predictions**, you can see that *Mean Learner* returns one (mean) value for all instances.



Predictions

Info

Data: 506 instances.
Predictors: 1
Task: Regression

Restore Original Order

Data View

Show full data set

Output

Original data
Predictions
Probabilities

Report

	Constant	MEDV	CRIM	ZN	INDUS
1	22.533	24.000	0.006	18.000	2.310
2	22.533	21.600	0.027	0.000	7.070
3	22.533	34.700	0.027	0.000	7.070
4	22.533	33.400	0.032	0.000	2.180
5	22.533	36.200	0.069	0.000	2.180
6	22.533	28.700	0.030	0.000	2.180
7	22.533	22.900	0.088	12.500	7.870
8	22.533	27.100	0.145	12.500	7.870
9	22.533	16.500	0.211	12.500	7.870
10	22.533	18.900	0.170	12.500	7.870
11	22.533	15.000	0.225	12.500	7.870
12	22.533	18.900	0.117	12.500	7.870
13	22.533	21.700	0.094	12.500	7.870