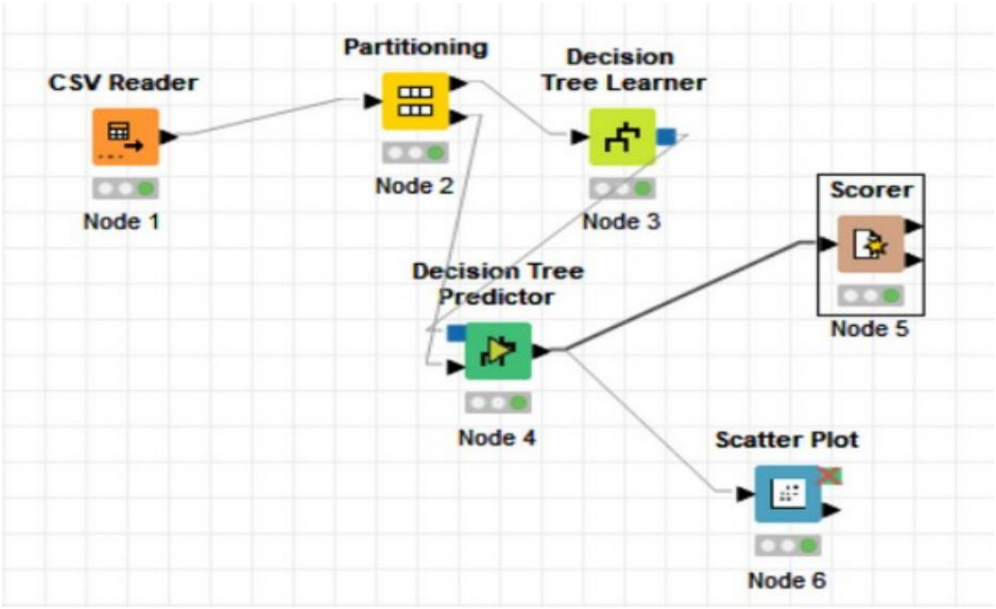
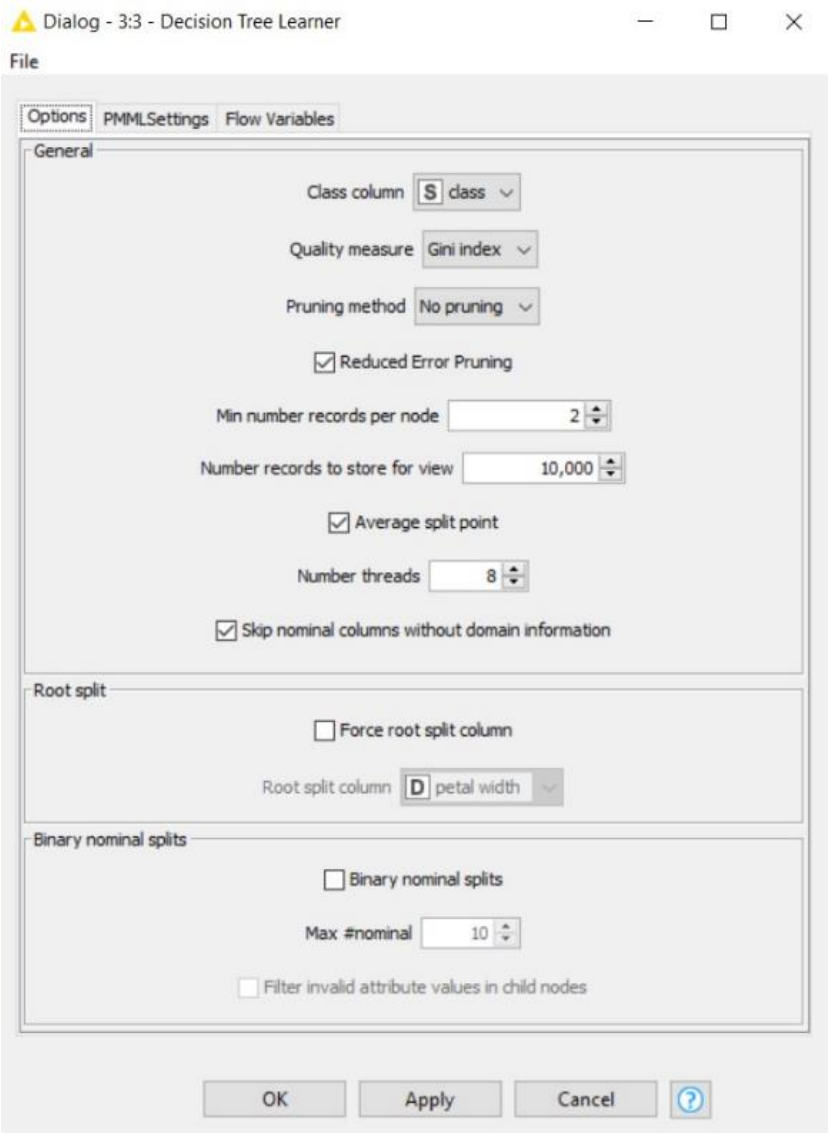
## 1. CLASSIFICATION (DECISION TABLE) WORKFLOW




**Initially,**



Confusion matrix - 3:5 - Scorer

File Edit Hilite Navigation View

Table "spec_name" - Rows: 3 | Spec - Columns: 3 | Properties | Flow Variables

| Row ID | Iris-virg... | Iris-ver... | Iris-set... |
|---|---|---|---|
| Iris-virginica | 17 | 0 | 0 |
| Iris-versicolor | 3 | 10 | 0 |
| Iris-setosa | 0 | 0 | 15 |

Accuracy statistics - 3:5 - Scorer

File Edit Hilite Navigation View

Table "default" - Rows: 4 | Spec - Columns: 11 | Properties | Flow Variables

| Row ID | TruePo... | FalsePo... | TrueNe... | FalseN... | Recall | Precision | Sensitivity | Specificity | F-meas... | Accuracy | Cohen'... |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iris-virginica | 17 | 3 | 25 | 0 | 1 | 0.85 | 1 | 0.893 | 0.919 | ? | ? |
| Iris-versicolor | 10 | 0 | 32 | 3 | 0.769 | 1 | 0.769 | 1 | 0.87 | ? | ? |
| Iris-setosa | 15 | 0 | 30 | 0 | 1 | 1 | 1 | 1 | 1 | ? | ? |
| Overall | ? | ? | ? | ? | ? | ? | ? | ? | ? | 0.933 | 0.898 |

**On changing mininimum number of records per node , number records to store for view and number threads**

Dialog - 3:3 - Decision Tree Learner

File

Options | PMMLSettings | Flow Variables

General

Class column: S class

Quality measure: Gini index

Pruning method: No pruning

☑ Reduced Error Pruning

Min number records per node: 5

Number records to store for view: 9,800

☑ Average split point

Number threads: 10

☑ Skip nominal columns without domain information

Root split

☐ Force root split column

Root split column: D petal width

Binary nominal splits

☐ Binary nominal splits

Max #nominal: 10

☐ Filter invalid attribute values in child nodes

OK | Apply | Cancel

Confusion matrix - 3:5 - Scorer

File Edit Hilite Navigation View

Table "spec_name" - Rows: 3 | Spec - Columns: 3 | Properties | Flow Variables

| Row ID | Iris-set... | Iris-ver... | Iris-virg... |
|---|---|---|---|
| Iris-setosa | 10 | 0 | 0 |
| Iris-versicolor | 0 | 19 | 0 |
| Iris-virginica | 0 | 0 | 16 |

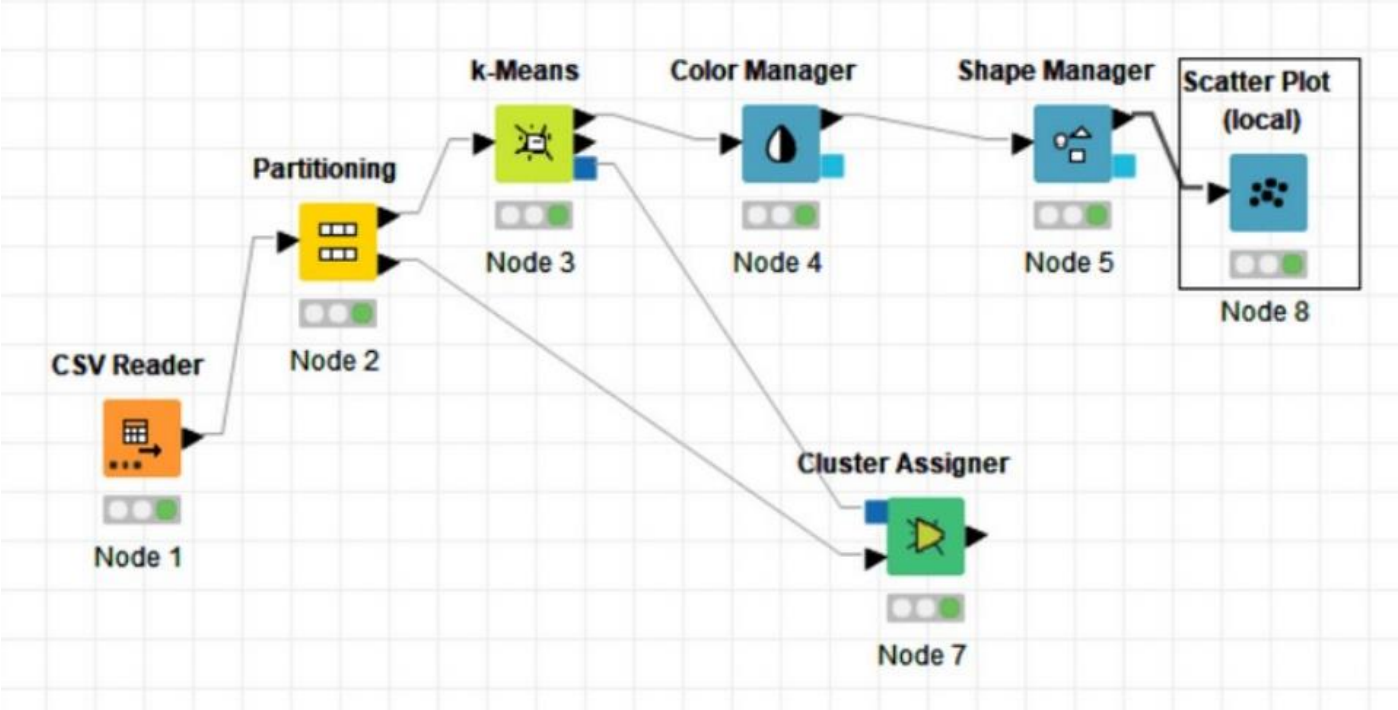
Accuracy statistics - 3:5 - Scorer

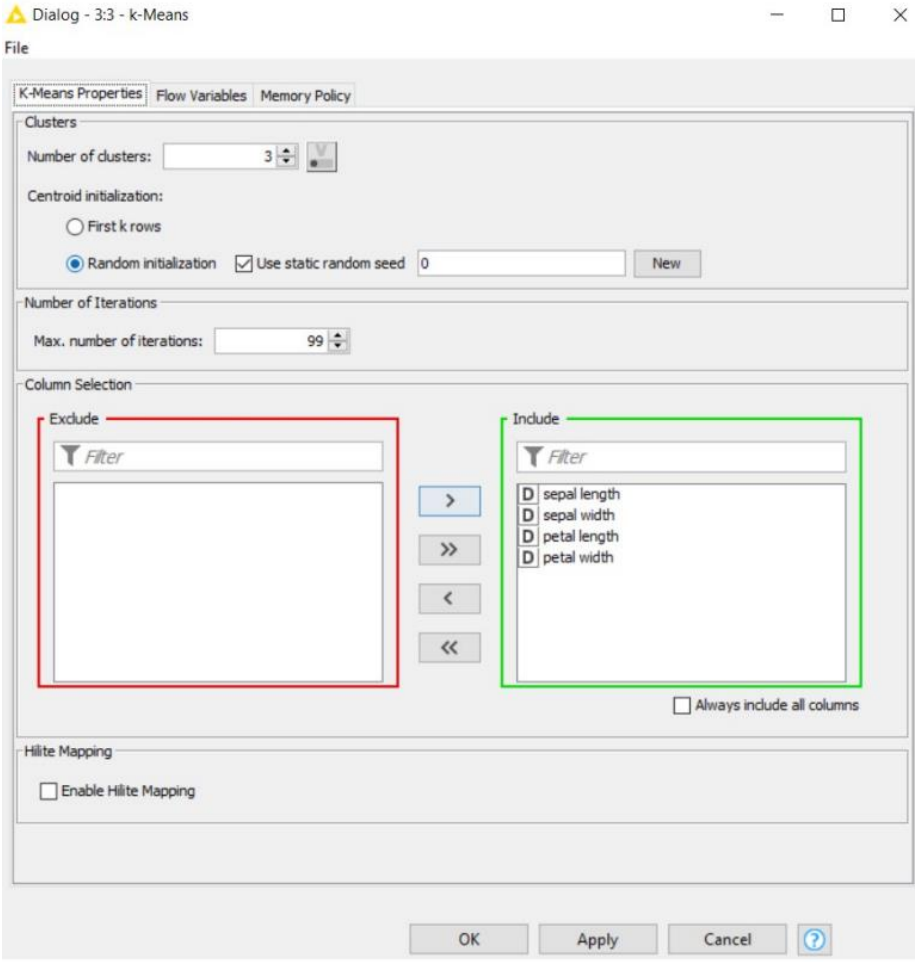
File Edit Hilite Navigation View

Table "default" - Rows: 4 | Spec - Columns: 11 | Properties | Flow Variables

| Row ID | TruePo... | FalsePo... | TrueNe... | FalseN... | Recall | Precision | Sensitivity | Specificity | F-meas... | Accuracy | Cohen'... |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iris-setosa | 10 | 0 | 35 | 0 | 1 | 1 | 1 | 1 | 1 | ? | ? |
| Iris-versicolor | 19 | 0 | 26 | 0 | 1 | 1 | 1 | 1 | 1 | ? | ? |
| Iris-virginica | 16 | 0 | 29 | 0 | 1 | 1 | 1 | 1 | 1 | ? | ? |
| Overall | ? | ? | ? | ? | ? | ? | ? | ? | ? | 1 | 1 |

## 2. CLUSTERING (K MEANS) WORKFLOW



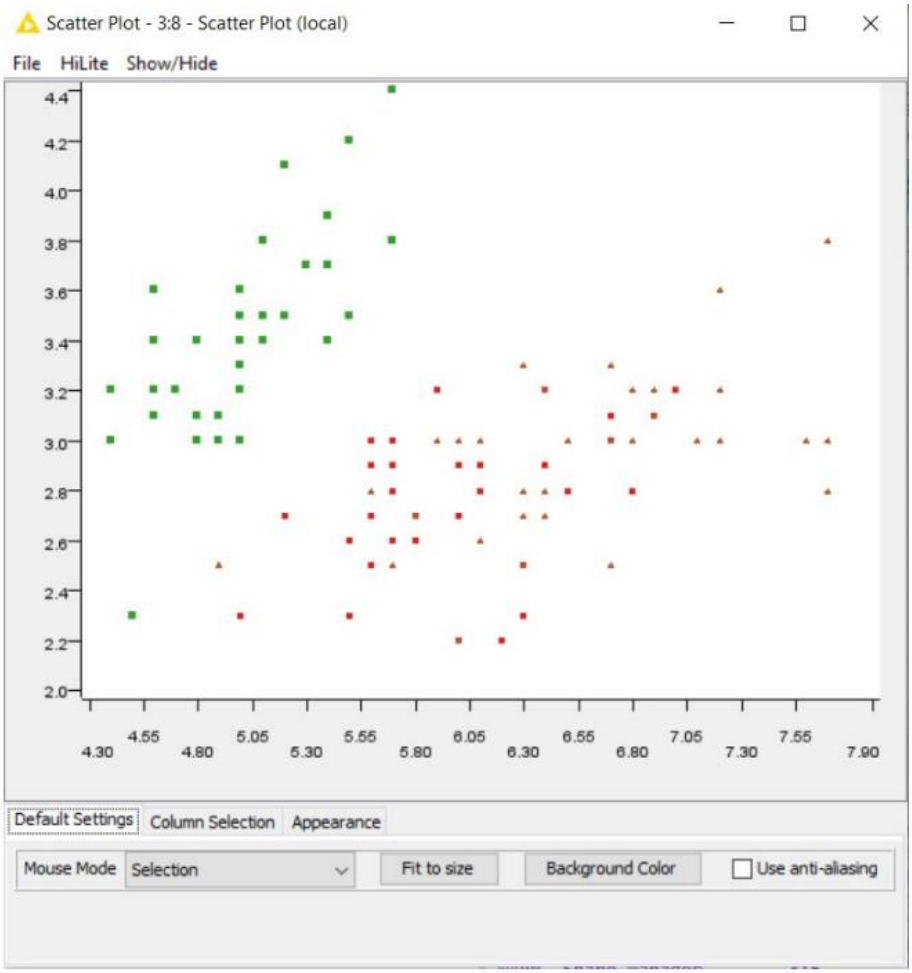



Assigned Data - 3:7 - Cluster Assigner

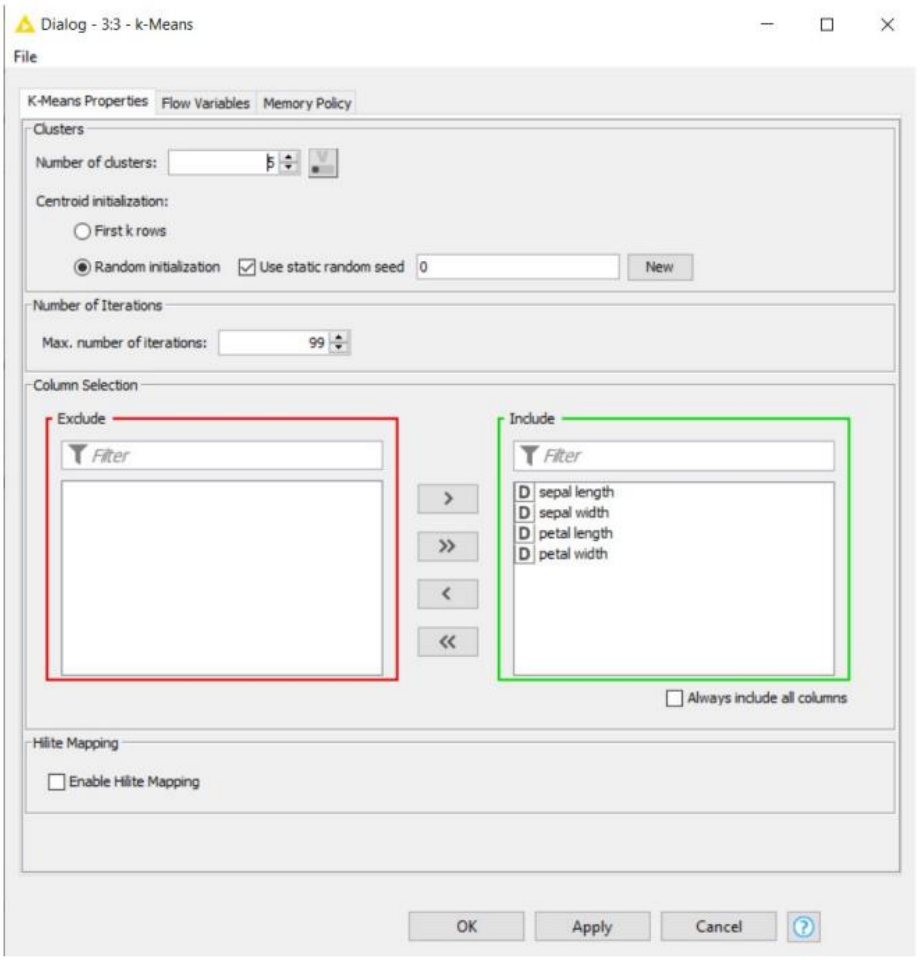
File Edit Hilite Navigation View

Table "default" - Rows: 45 | Spec - Columns: 6 | Properties | Flow Variables

| Row ID | sepal le... | sepal w... | petal le... | petal wi... | class | Cluster |
|---|---|---|---|---|---|---|
| Row7 | 5 | 3.4 | 1.5 | 0.2 | Iris-setosa | cluster_0 |
| Row8 | 4.4 | 2.9 | 1.4 | 0.2 | Iris-setosa | cluster_0 |
| Row11 | 4.8 | 3.4 | 1.6 | 0.2 | Iris-setosa | cluster_0 |
| Row13 | 4.3 | 3 | 1.1 | 0.1 | Iris-setosa | cluster_0 |
| Row14 | 5.8 | 4 | 1.2 | 0.2 | Iris-setosa | cluster_0 |
| Row21 | 5.1 | 3.7 | 1.5 | 0.4 | Iris-setosa | cluster_0 |
| Row23 | 5.1 | 3.3 | 1.7 | 0.5 | Iris-setosa | cluster_0 |
| Row28 | 5.2 | 3.4 | 1.4 | 0.2 | Iris-setosa | cluster_0 |
| Row31 | 5.4 | 3.4 | 1.5 | 0.4 | Iris-setosa | cluster_0 |
| Row44 | 5.1 | 3.8 | 1.9 | 0.4 | Iris-setosa | cluster_0 |
| Row56 | 6.3 | 3.3 | 4.7 | 1.6 | Iris-versicolor | cluster_1 |
| Row57 | 4.9 | 2.4 | 3.3 | 1 | Iris-versicolor | cluster_1 |
| Row58 | 6.6 | 2.9 | 4.6 | 1.3 | Iris-versicolor | cluster_1 |
| Row60 | 5 | 2 | 3.5 | 1 | Iris-versicolor | cluster_1 |
| Row61 | 5.9 | 3 | 4.2 | 1.5 | Iris-versicolor | cluster_1 |
| Row71 | 6.1 | 2.8 | 4 | 1.3 | Iris-versicolor | cluster_1 |
| Row75 | 6.6 | 3 | 4.4 | 1.4 | Iris-versicolor | cluster_1 |
| Row80 | 5.5 | 2.4 | 3.8 | 1.1 | Iris-versicolor | cluster_1 |
| Row81 | 5.5 | 2.4 | 3.7 | 1 | Iris-versicolor | cluster_1 |
| Row82 | 5.8 | 2.7 | 3.9 | 1.2 | Iris-versicolor | cluster_1 |
| Row84 | 5.4 | 3 | 4.5 | 1.5 | Iris-versicolor | cluster_1 |
| Row85 | 6 | 3.4 | 4.5 | 1.6 | Iris-versicolor | cluster_1 |
| Row86 | 6.7 | 3.1 | 4.7 | 1.5 | Iris-versicolor | cluster_1 |
| Row88 | 5.6 | 3 | 4.1 | 1.3 | Iris-versicolor | cluster_1 |
| Row89 | 5.5 | 2.5 | 4 | 1.3 | Iris-versicolor | cluster_1 |
| Row91 | 6.1 | 3 | 4.6 | 1.4 | Iris-versicolor | cluster_1 |
| Row97 | 6.2 | 2.9 | 4.3 | 1.3 | Iris-versicolor | cluster_1 |
| Row98 | 5.1 | 2.5 | 3 | 1.1 | Iris-versicolor | cluster_1 |
| Row99 | 5.7 | 2.8 | 4.1 | 1.3 | Iris-versicolor | cluster_1 |
| Row103 | 6.3 | 2.9 | 5.6 | 1.8 | Iris-virginica | cluster_2 |
| Row104 | 6.5 | 3 | 5.8 | 2.2 | Iris-virginica | cluster_2 |
| Row107 | 7.3 | 2.9 | 6.3 | 1.8 | Iris-virginica | cluster_2 |
| Row110 | 6.5 | 3.2 | 5.1 | 2 | Iris-virginica | cluster_2 |
| Row114 | 5.8 | 2.8 | 5.1 | 2.4 | Iris-virginica | cluster_1 |
| Row116 | 6.5 | 3 | 5.5 | 1.8 | Iris-virginica | cluster_2 |
| Row118 | 7.7 | 2.6 | 6.9 | 2.3 | Iris-virginica | cluster_2 |
| Row126 | 6.2 | 2.8 | 4.8 | 1.8 | Iris-virginica | cluster_1 |
| Row128 | 6.4 | 2.8 | 5.6 | 2.1 | Iris-virginica | cluster_2 |




**After modifying number of clusters to five**



Assigned Data - 3:7 - Cluster Assigner

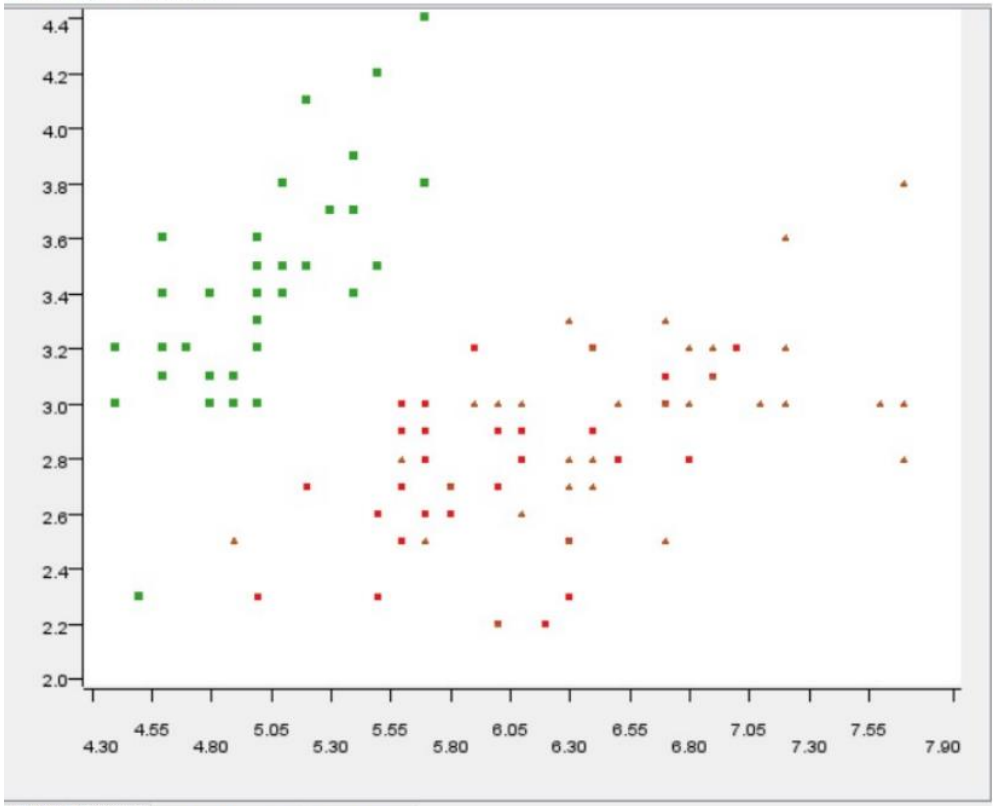
File Edit Hilite Navigation View

Table "default" - Rows: 45 | Spec - Columns: 6 | Properties | Flow Variables

| Row ID | D sepal le... | D sepal w... | D petal le... | D petal wi... | S class | S Cluster |
|---|---|---|---|---|---|---|
| Row7 | 5 | 3.4 | 1.5 | 0.2 | Iris-setosa | cluster_2 |
| Row8 | 4.4 | 2.9 | 1.4 | 0.2 | Iris-setosa | cluster_1 |
| Row11 | 4.8 | 3.4 | 1.6 | 0.2 | Iris-setosa | cluster_2 |
| Row13 | 4.3 | 3 | 1.1 | 0.1 | Iris-setosa | cluster_1 |
| Row14 | 5.8 | 4 | 1.2 | 0.2 | Iris-setosa | cluster_0 |
| Row21 | 5.1 | 3.7 | 1.5 | 0.4 | Iris-setosa | cluster_2 |
| Row23 | 5.1 | 3.3 | 1.7 | 0.5 | Iris-setosa | cluster_2 |
| Row28 | 5.2 | 3.4 | 1.4 | 0.2 | Iris-setosa | cluster_2 |
| Row31 | 5.4 | 3.4 | 1.5 | 0.4 | Iris-setosa | cluster_2 |
| Row44 | 5.1 | 3.8 | 1.9 | 0.4 | Iris-setosa | cluster_0 |
| Row56 | 6.3 | 3.3 | 4.7 | 1.6 | Iris-versicolor | cluster_3 |
| Row57 | 4.9 | 2.4 | 3.3 | 1 | Iris-versicolor | cluster_3 |
| Row58 | 6.6 | 2.9 | 4.6 | 1.3 | Iris-versicolor | cluster_3 |
| Row60 | 5 | 2 | 3.5 | 1 | Iris-versicolor | cluster_3 |
| Row61 | 5.9 | 3 | 4.2 | 1.5 | Iris-versicolor | cluster_3 |
| Row71 | 6.1 | 2.8 | 4 | 1.3 | Iris-versicolor | cluster_3 |
| Row75 | 6.6 | 3 | 4.4 | 1.4 | Iris-versicolor | cluster_3 |
| Row80 | 5.5 | 2.4 | 3.8 | 1.1 | Iris-versicolor | cluster_3 |
| Row81 | 5.5 | 2.4 | 3.7 | 1 | Iris-versicolor | cluster_3 |
| Row82 | 5.8 | 2.7 | 3.9 | 1.2 | Iris-versicolor | cluster_3 |
| Row84 | 5.4 | 3 | 4.5 | 1.5 | Iris-versicolor | cluster_3 |
| Row85 | 6 | 3.4 | 4.5 | 1.6 | Iris-versicolor | cluster_3 |
| Row86 | 6.7 | 3.1 | 4.7 | 1.5 | Iris-versicolor | cluster_3 |
| Row88 | 5.6 | 3 | 4.1 | 1.3 | Iris-versicolor | cluster_3 |
| Row89 | 5.5 | 2.5 | 4 | 1.3 | Iris-versicolor | cluster_3 |
| Row91 | 6.1 | 3 | 4.6 | 1.4 | Iris-versicolor | cluster_3 |
| Row97 | 6.2 | 2.9 | 4.3 | 1.3 | Iris-versicolor | cluster_3 |
| Row98 | 5.1 | 2.5 | 3 | 1.1 | Iris-versicolor | cluster_3 |
| Row99 | 5.7 | 2.8 | 4.1 | 1.3 | Iris-versicolor | cluster_3 |
| Row103 | 6.3 | 2.9 | 5.6 | 1.8 | Iris-virginica | cluster_4 |
| Row104 | 6.5 | 3 | 5.8 | 2.2 | Iris-virginica | cluster_4 |
| Row107 | 7.3 | 2.9 | 6.3 | 1.8 | Iris-virginica | cluster_4 |
| Row110 | 6.5 | 3.2 | 5.1 | 2 | Iris-virginica | cluster_4 |
| Row114 | 5.8 | 2.8 | 5.1 | 2.4 | Iris-virginica | cluster_3 |
| Row116 | 6.5 | 3 | 5.5 | 1.8 | Iris-virginica | cluster_4 |
| Row118 | 7.7 | 2.6 | 6.9 | 2.3 | Iris-virginica | cluster_4 |
| Row126 | 6.2 | 2.8 | 4.8 | 1.8 | Iris-virginica | cluster_3 |
| Row128 | 6.4 | 2.8 | 5.6 | 2.1 | Iris-virginica | cluster_4 |

Scatter Plot - 3:6 - Scatter Plot (local)

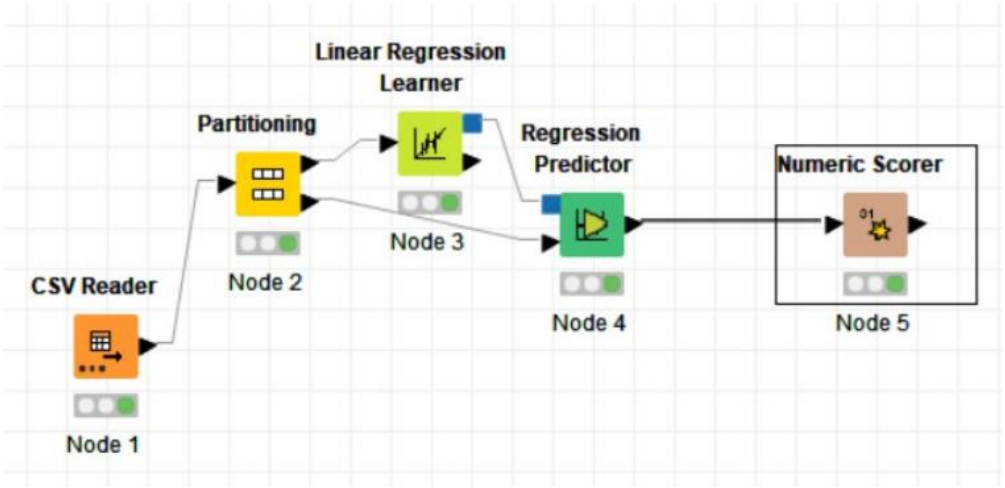
File HiLite Show/Hide



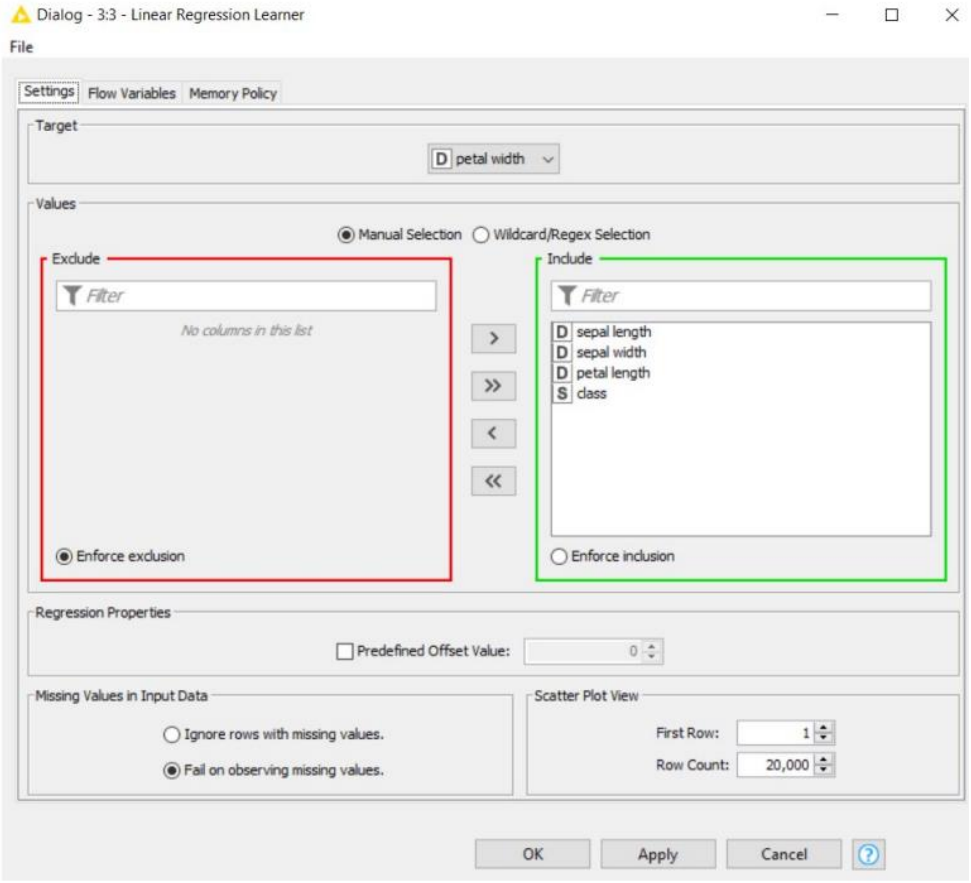

Default Settings | Column Selection | Appearance

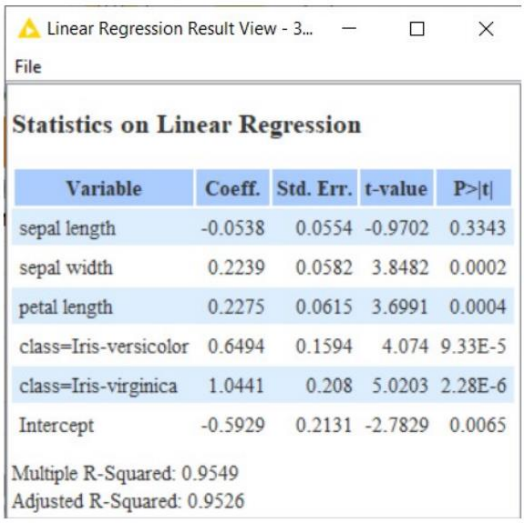
Mouse Mode: Selection | Fit to size | Background Color | Use anti-aliasing

## 3. REGRESSION (LINEAR REGRESSION) WORKFLOW




**Initially:**

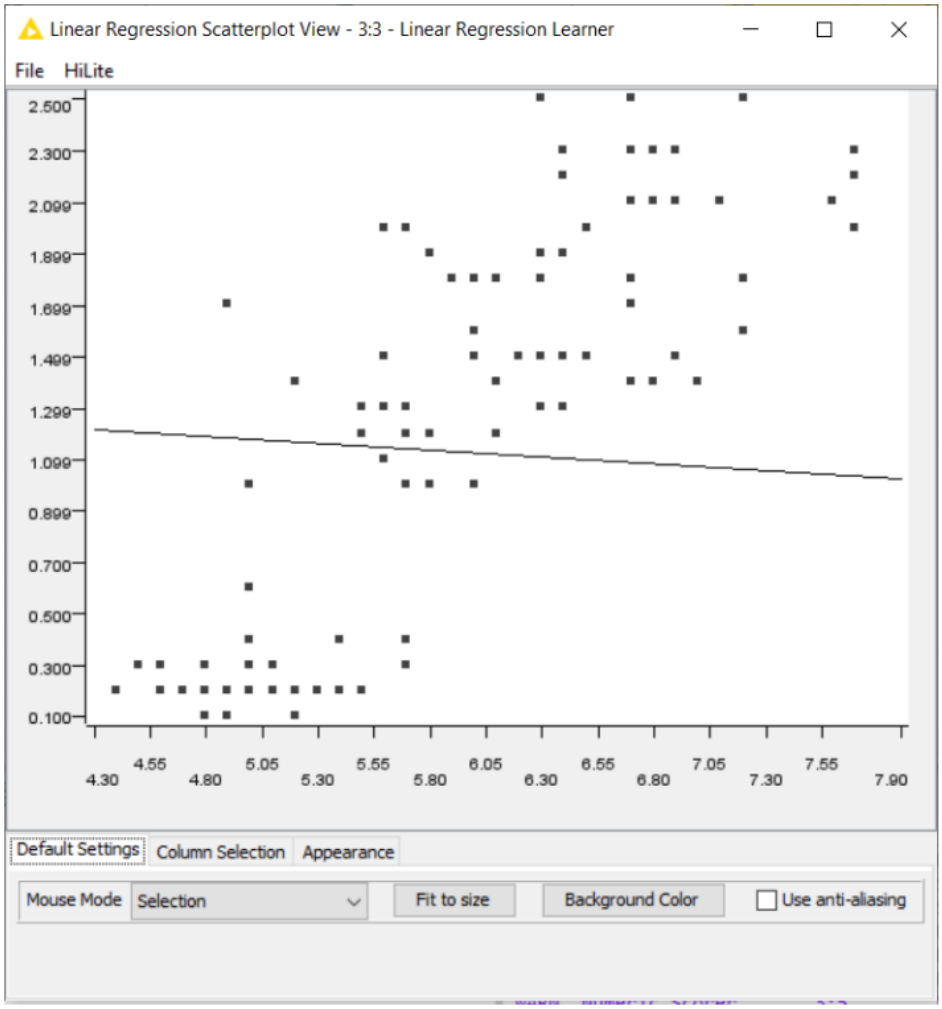


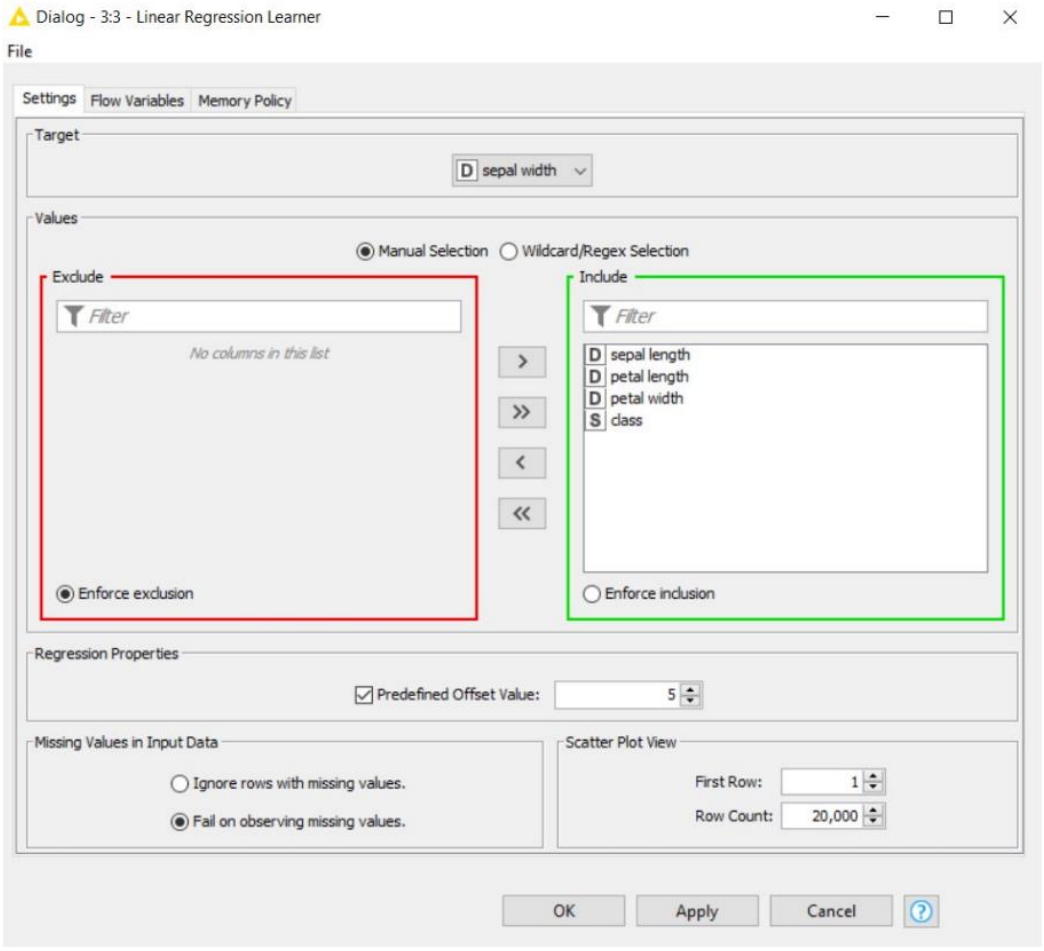

**Statistics on Linear Regression**

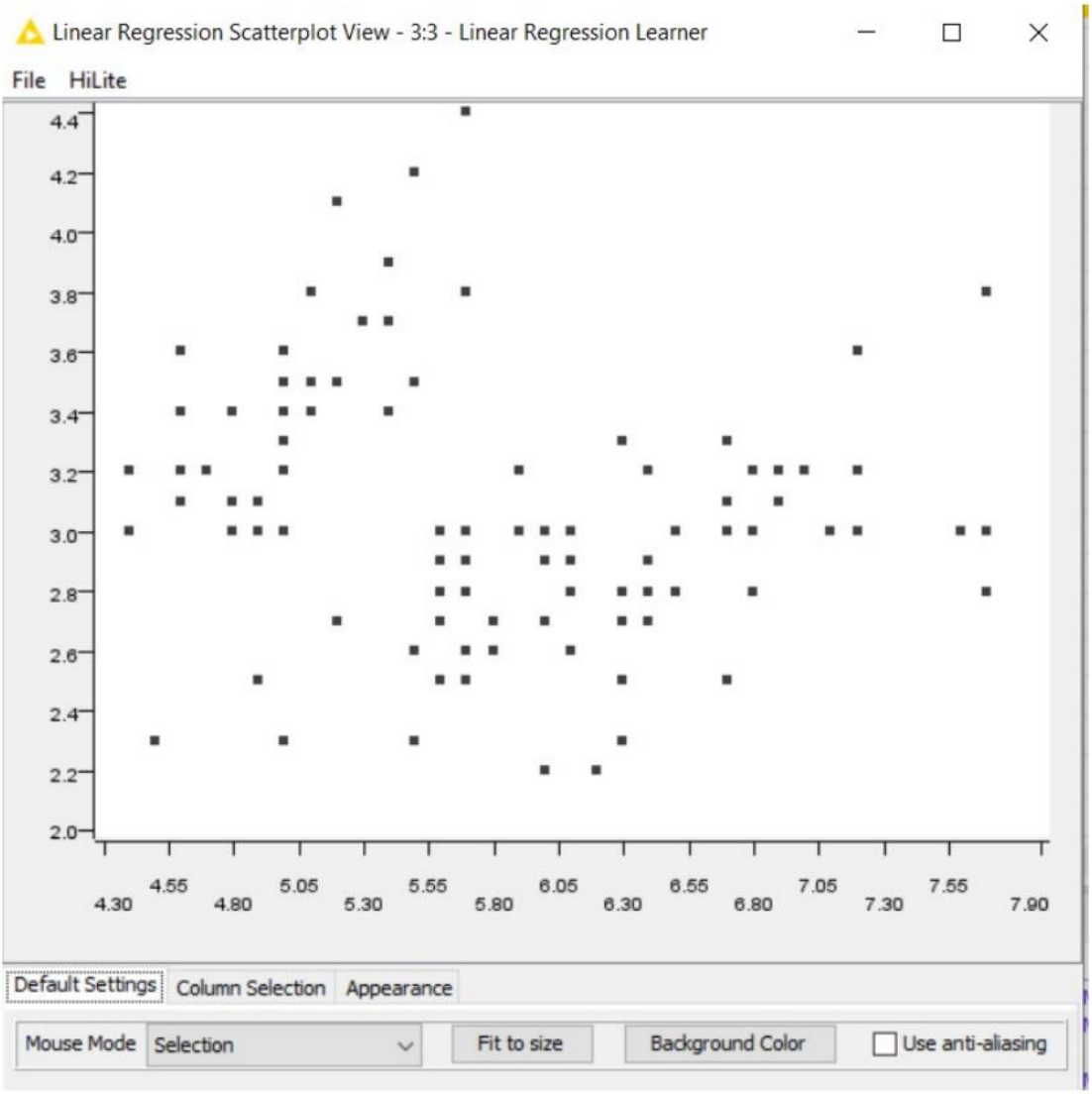
| Variable | Coeff. | Std. Err. | t-value | P>\|t\| |
|---|---|---|---|---|
| sepal length | -0.0538 | 0.0554 | -0.9702 | 0.3343 |
| sepal width | 0.2239 | 0.0582 | 3.8482 | 0.0002 |
| petal length | 0.2275 | 0.0615 | 3.6991 | 0.0004 |
| class=Iris-versicolor | 0.6494 | 0.1594 | 4.074 | 9.33E-5 |
| class=Iris-virginica | 1.0441 | 0.208 | 5.0203 | 2.28E-6 |
| Intercept | -0.5929 | 0.2131 | -2.7829 | 0.0065 |

Multiple R-Squared: 0.9549
Adjusted R-Squared: 0.9526




**On changing Target and predefined offset value**






Linear Regression Result View - 3:...

File

## Statistics on Linear Regression

| Variable | Coeff. | Std. Err. | t-value | P>\|t\| |
|---|---|---|---|---|
| sepal length | -0.4224 | 0.0403 | -10.4831 | 0.0 |
| petal length | 0.2789 | 0.1381 | 2.0197 | 0.0461 |
| petal width | 0.7866 | 0.2186 | 3.5979 | 0.0005 |
| class=Iris-versicolor | -1.9776 | 0.3502 | -5.647 | 1.54E-7 |
| class=Iris-virginica | -2.3884 | 0.4904 | -4.8699 | 4.19E-6 |

Offset Value: 5
Multiple R-Squared: 0.9606
Adjusted R-Squared: 0.9587