

Data Warehousing and Data Mining Mini Project

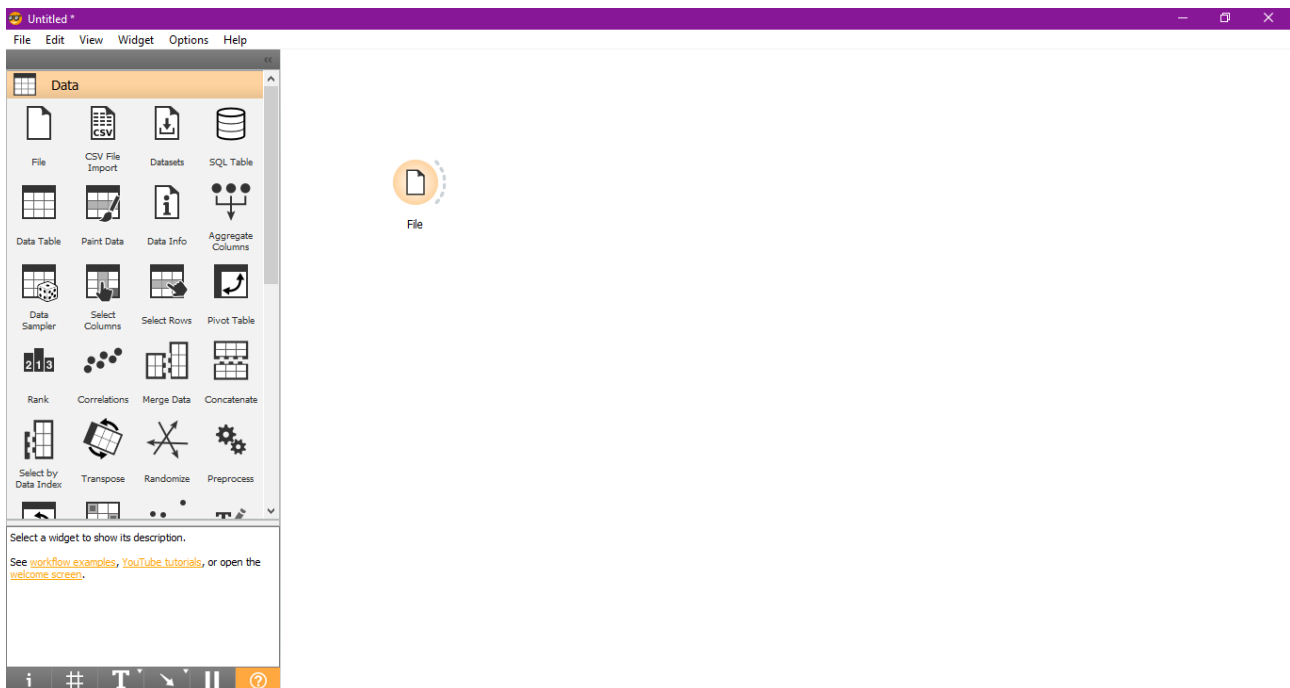
Aim: Perform hierarchical clustering and classification tree on the “Iris” dataset in Orange3.

Procedure:

- Start Orange3. You should see this screen.



- Now, drag and drop the ‘File’ icon from the left pane onto the page.



- Double click the 'File' widget you just dropped on the screen. You should see this window.

File

Source

☒ File: ... Reload

☐ URL:

Info

Iris flower dataset
 Classical dataset with 150 instances of Iris setosa, Iris virginica and Iris versicolor.

150 instance(s)
 4 feature(s) (no missing values)
 Classification; categorical class with 3 values (no missing values)
 0 meta attribute(s)

Columns (Double click to edit)

	Name	Type	Role	Values
1	sepal length	N numeric	feature	
2	sepal width	N numeric	feature	
3	petal length	N numeric	feature	
4	petal width	N numeric	feature	
5	iris	C categorical	target	Iris-setosa, Iris-versicolor, Iris-virginica

Reset

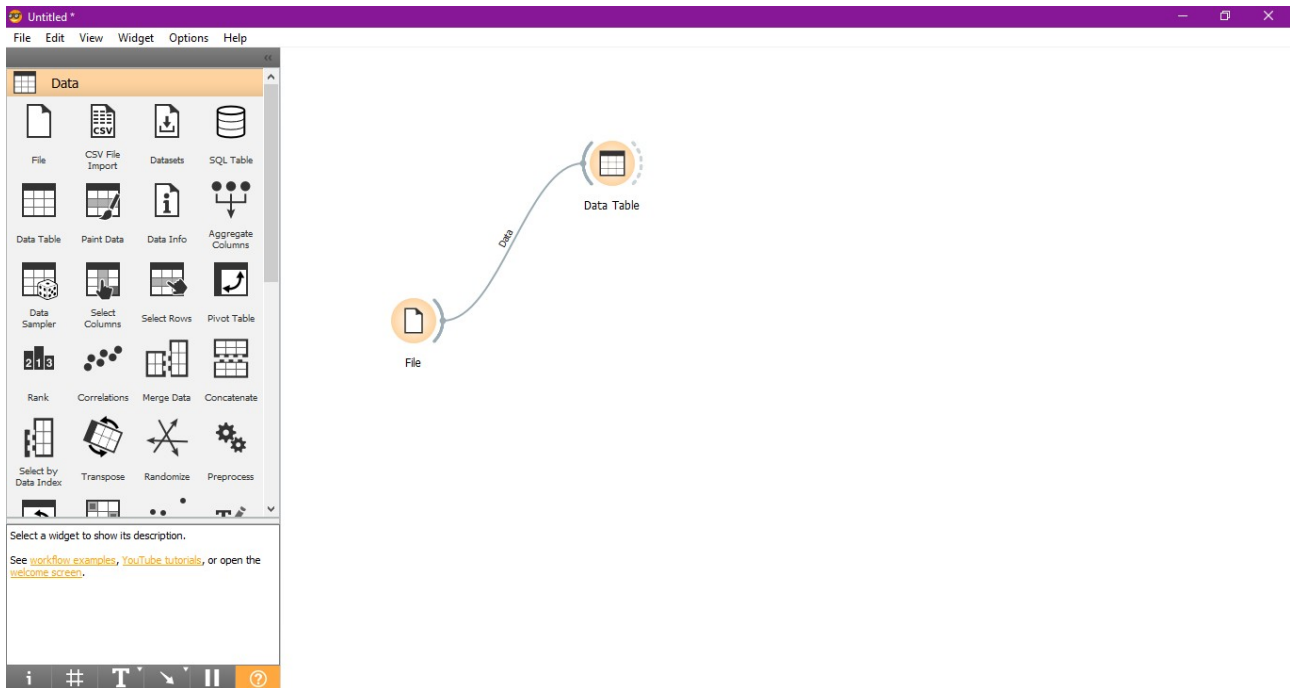
Apply

Browse documentation datasets

?

150

- Now, select the 'Iris.tab' dataset from the drop down list and close the window. Now, drag and drop the 'Data Table' widget onto the screen. Now connect the 'File' widget to the 'Data Table' widget.



- Now, double click the 'Data Table' widget to generate this window.

Data Table

Info
 150 instances (no missing data)
 4 features
 Target with 3 values
 No meta attributes

Variables
☒ Show variable labels (if present)
☐ Visualize numeric values
☒ Color by instance classes

Selection
☒ Select full rows

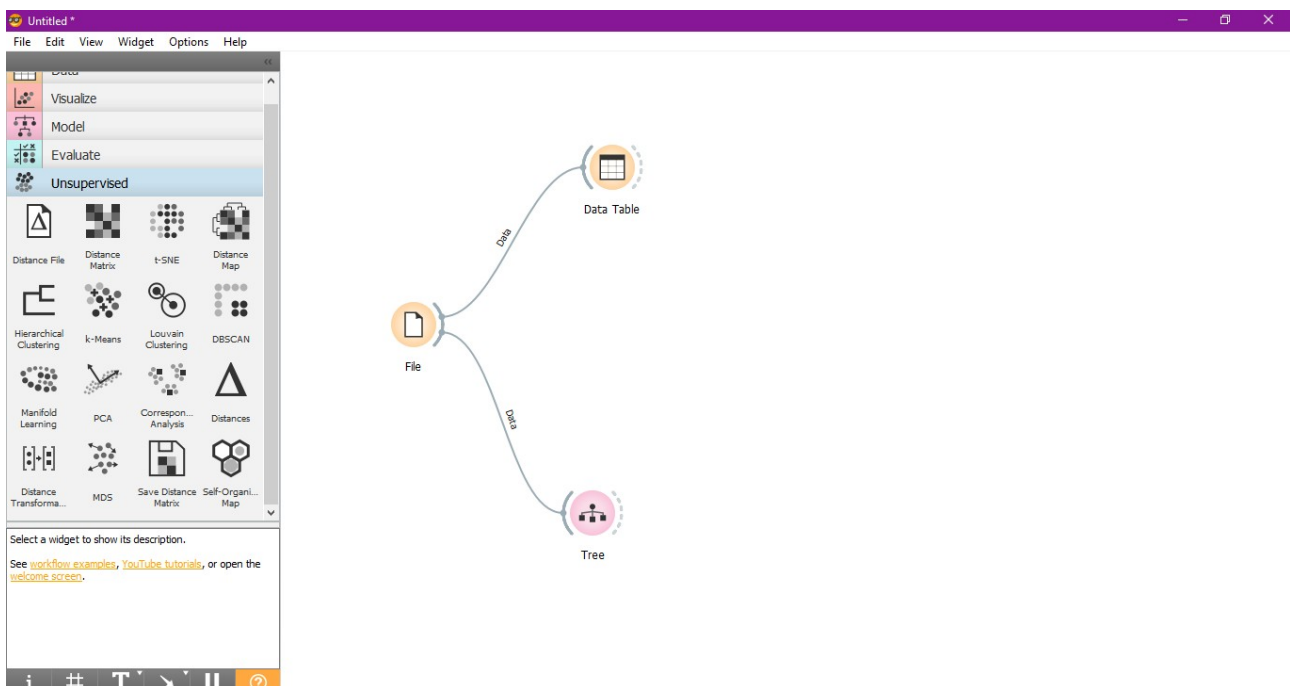
Restore Original Order

☒ Send Automatically

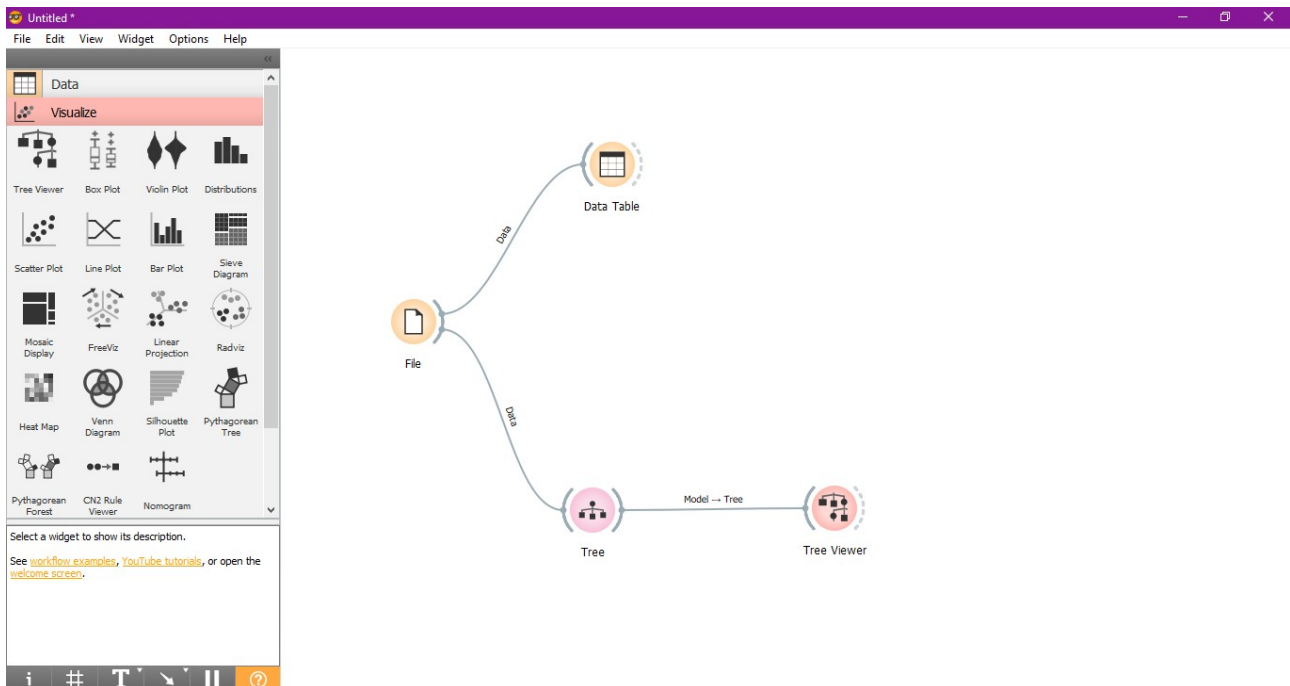
	iris	sepal length	sepal width	petal length	petal width
1	Iris-setosa	5.1	3.5	1.4	0.2
2	Iris-setosa	4.9	3.0	1.4	0.2
3	Iris-setosa	4.7	3.2	1.3	0.2
4	Iris-setosa	4.6	3.1	1.5	0.2
5	Iris-setosa	5.0	3.6	1.4	0.2
6	Iris-setosa	5.4	3.9	1.7	0.4
7	Iris-setosa	4.6	3.4	1.4	0.3
8	Iris-setosa	5.0	3.4	1.5	0.2
9	Iris-setosa	4.4	2.9	1.4	0.2
10	Iris-setosa	4.9	3.1	1.5	0.1
11	Iris-setosa	5.4	3.7	1.5	0.2
12	Iris-setosa	4.8	3.4	1.6	0.2
13	Iris-setosa	4.8	3.0	1.4	0.1
14	Iris-setosa	4.3	3.0	1.1	0.1
15	Iris-setosa	5.8	4.0	1.2	0.2
16	Iris-setosa	5.7	4.4	1.5	0.4
17	Iris-setosa	5.4	3.9	1.3	0.4
18	Iris-setosa	5.1	3.5	1.4	0.3
19	Iris-setosa	5.7	3.8	1.7	0.3
20	Iris-setosa	5.1	3.8	1.5	0.3
21	Iris-setosa	5.4	3.4	1.7	0.2

150 | 150 | 150

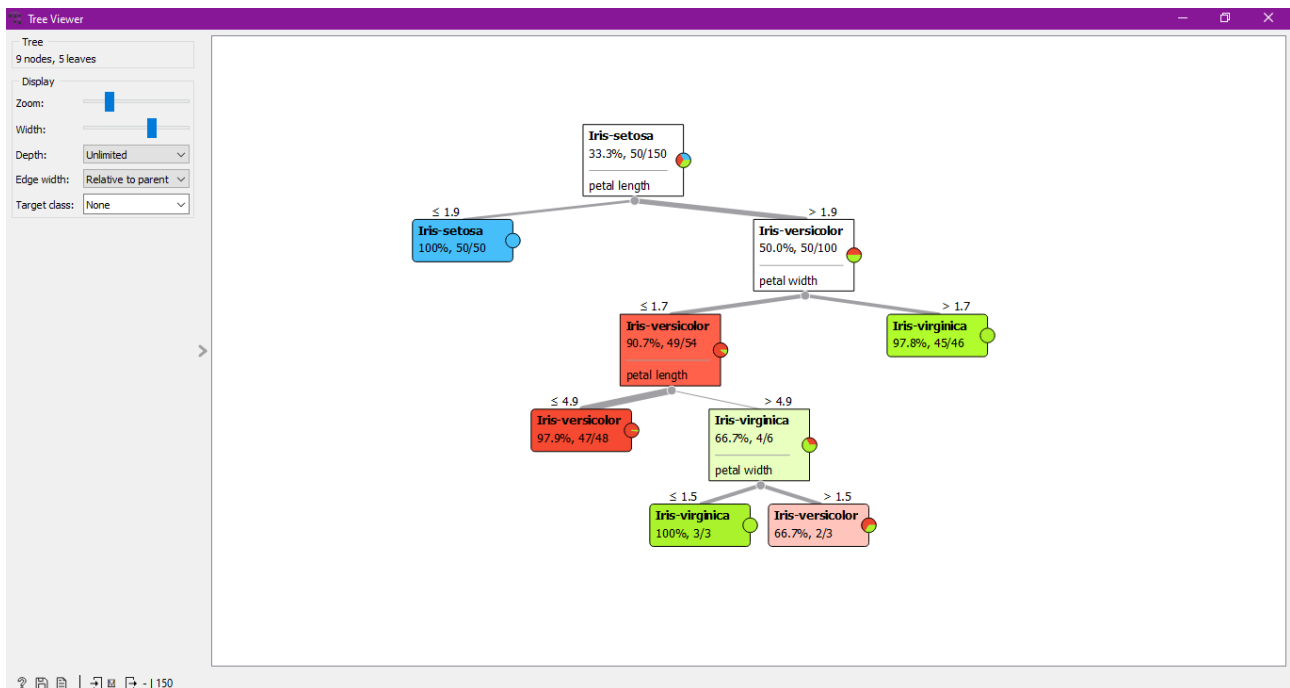
- Now, drag and drop the 'Tree' widget. It can be found in the 'Unsupervised' section. Now connect the 'File' widget to the 'Tree' widget.



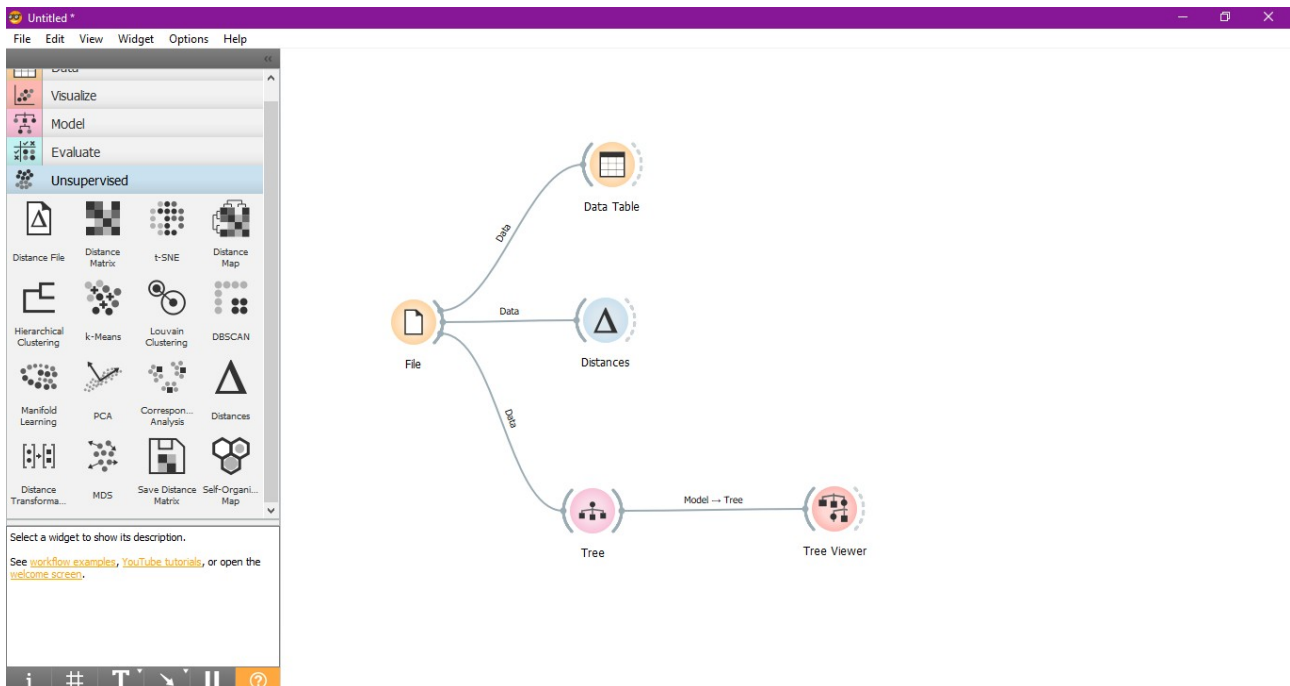
- Drag and drop the 'Tree Viewer' widget to the screen. It can be found in the 'Visualize' section. Now connect the 'Tree' widget to the 'Tree Viewer' widget.



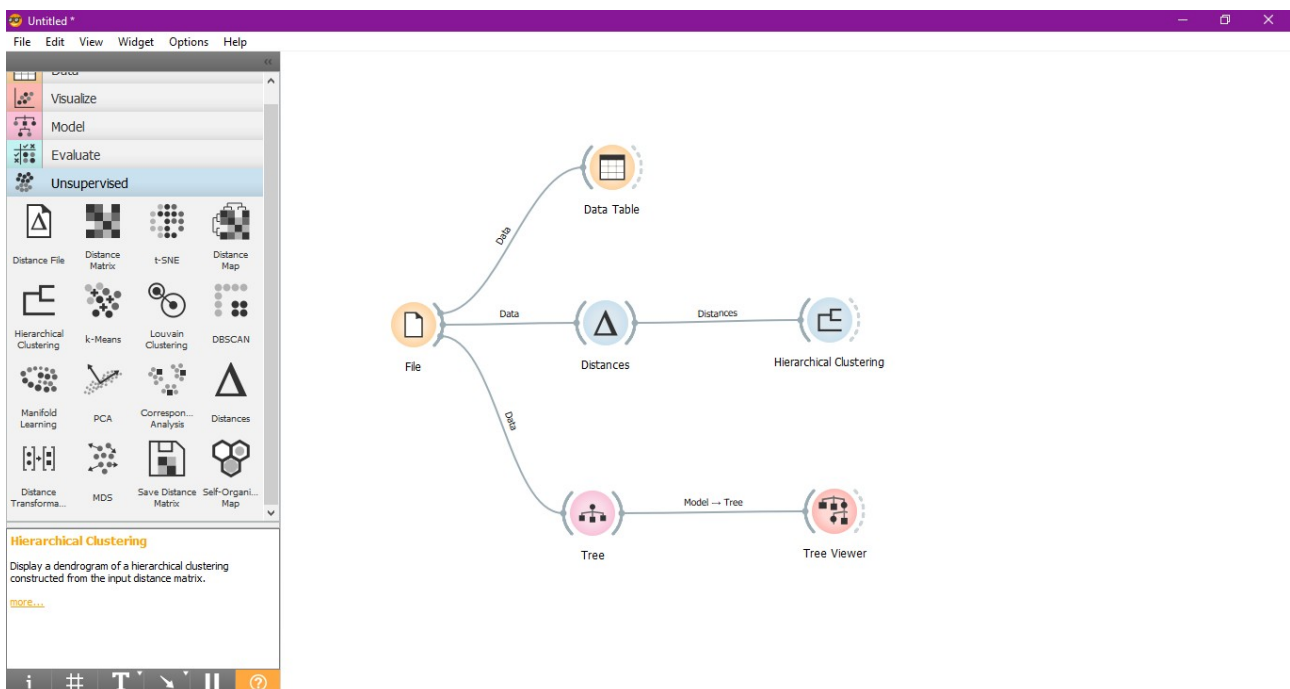
- Now, double click the 'Tree Viewer' widget to display the tree.



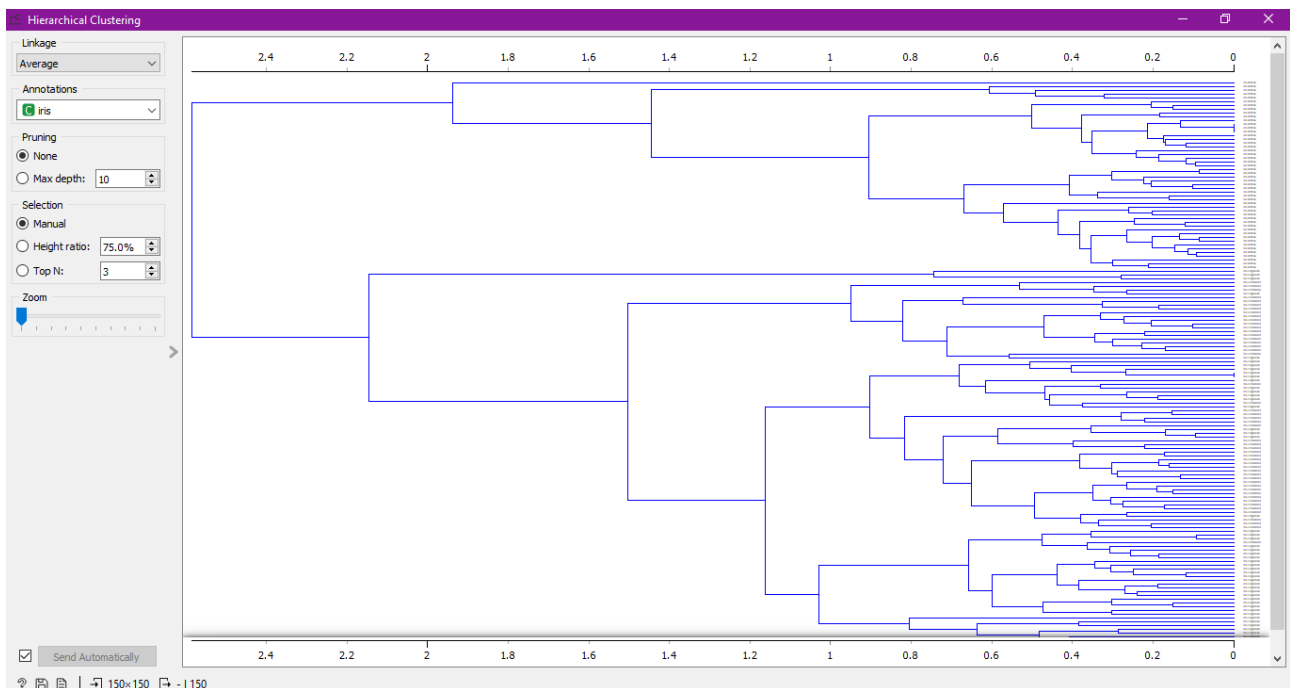
- Now, drag and drop the 'Distances' widget from the 'Unsupervised' section to the screen. Connect the 'File' widget to the 'Distances' widget.



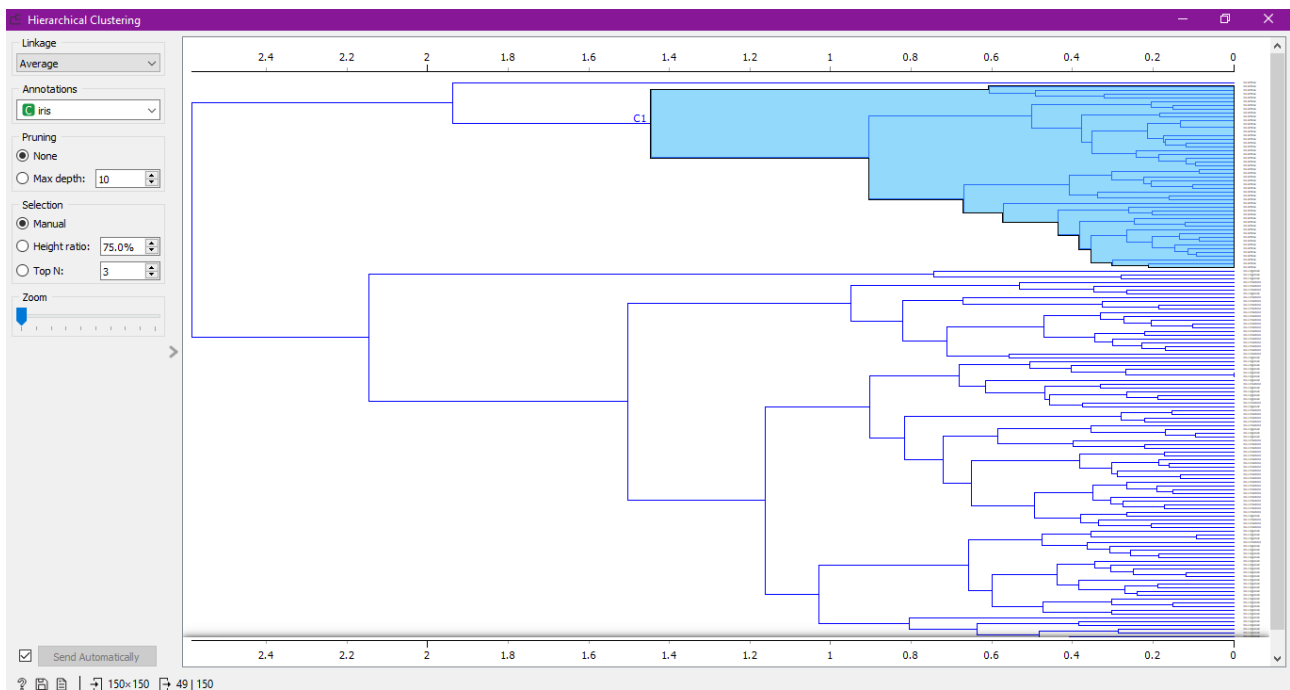
- Also drag and drop the 'Hierarchical Clustering' widget from the 'Unsupervised' section to the screen. Connect the 'Distances' widget to the 'Hierarchical Clustering' widget.



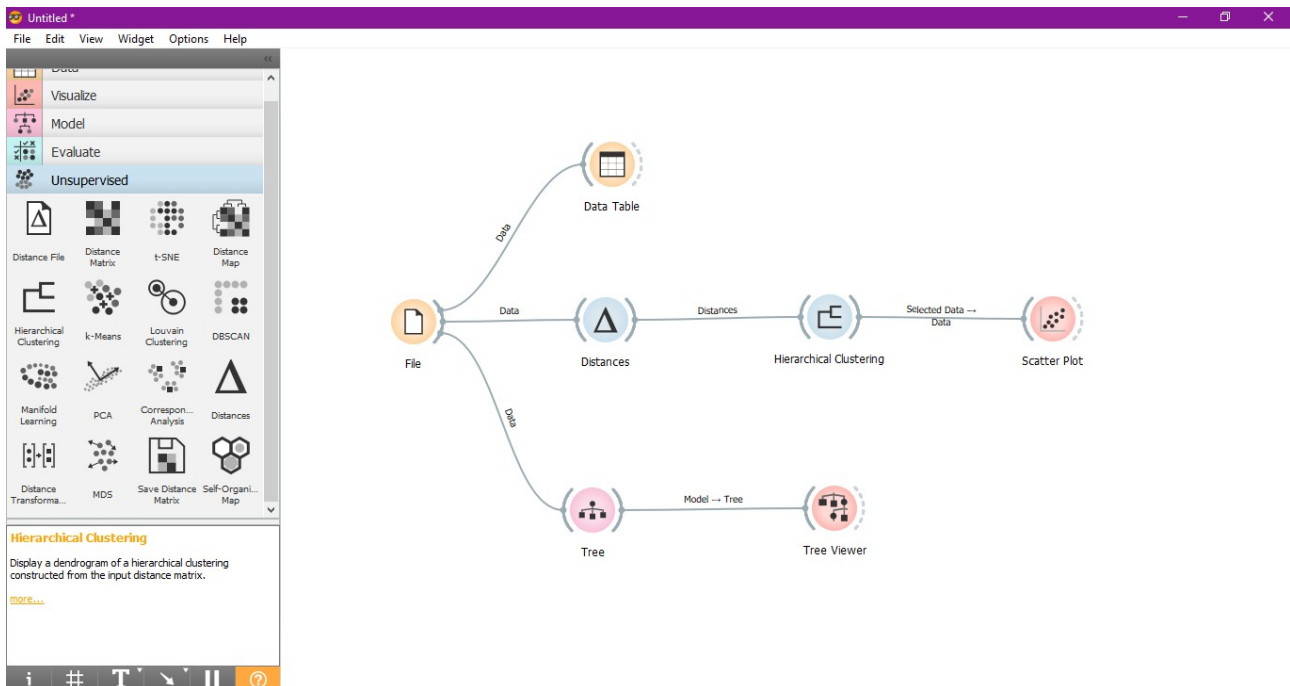
- Now, double click the 'Hierarchical Clustering' widget to see this window.



- Now, select a part of the cluster and click it to cement the selection.



- Drag and drop the 'Scatter Plot' widget from the 'Visualize' section to the screen. Connect the 'Hierarchical Clustering' widget to the 'Scatter Plot' widget.



- Now, double click the 'Scatter Plot' widget to view the plot.

