

TA2 - Enzo Cozza - Agustín Fernández

Ejercicio 1

Operador: Agglomerative Clustering

Parámetros:

Mode: especifica el tipo de cluster y el enlace.

Measure types: define el tipo de medida. Las opciones son mixed measures, nominal measures, numerical measures y Bregman measures.

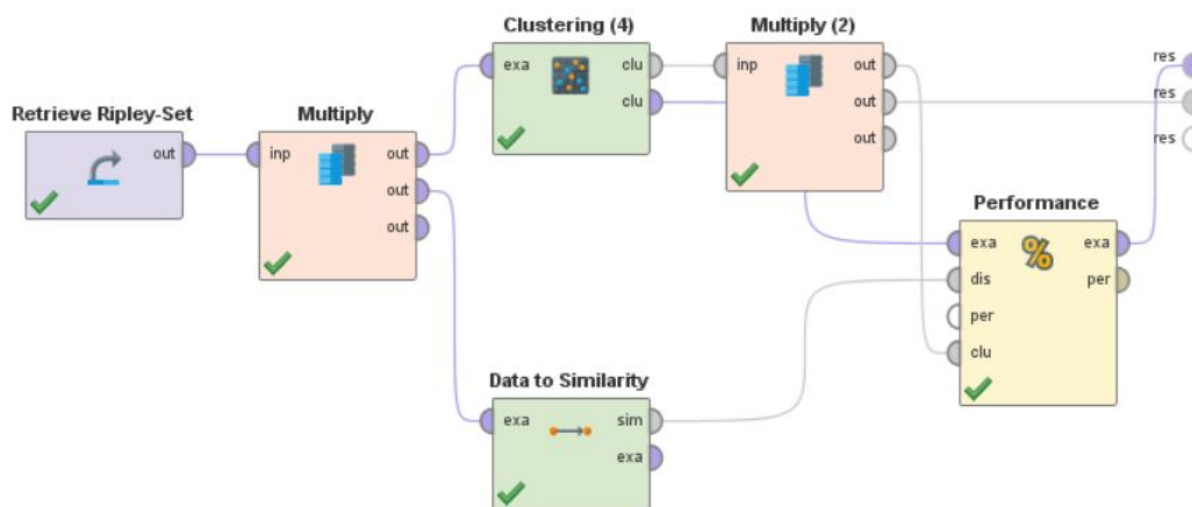
Operador: Top Down

Parámetros:

Create user label: especifica si debe ser creado el label del cluster. Si se marca, un nuevo atributo "cluster" es generado en el resultante ExampleSet.

Max depth: Especifica la profundidad máxima del árbol.

Max leaf size: Especifica la máxima cantidad de ítems en cada hoja de cluster.



Cluster Model

```
Cluster 0: 39 items
Cluster 1: 55 items
Cluster 2: 63 items
Cluster 3: 40 items
Cluster 4: 53 items
Total number of items: 250
```

Operador: DBSCAN

The diagram illustrates a data analysis workflow in Orange3. The steps are as follows:

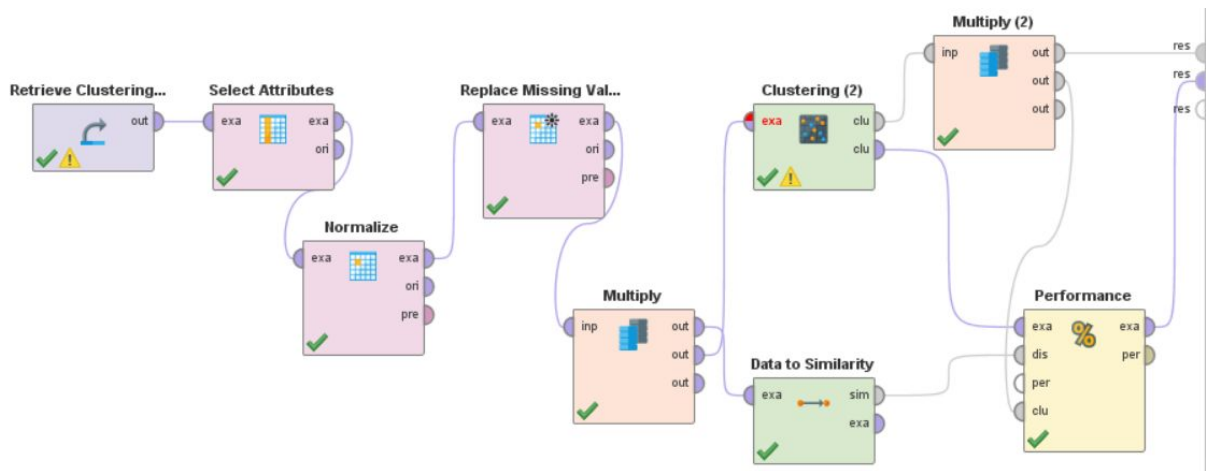
- Retrieve Clustering...:** A light blue box with a green checkmark and a yellow warning icon. It has an 'out' port.
- Select Attributes:** A pink box with a green checkmark. It has 'exa' and 'ori' ports.
- Normalize:** A pink box with a green checkmark. It has 'exa', 'ori', and 'pre' ports.
- Replace Missing Values:** A pink box with a green checkmark. It has 'exa', 'ori', and 'pre' ports.
- Multiply:** An orange box with a green checkmark. It has 'inp', 'out', and 'out' ports.
- Clustering:** A green box with a green checkmark. It has 'exa', 'clu', and 'clu' ports.
- Data to Similarity:** A green box with a green checkmark. It has 'exa', 'sim', and 'exa' ports.
- Multiply (2):** An orange box with a green checkmark. It has 'inp', 'out', and 'out' ports.
- Performance:** A yellow box with a green checkmark. It has 'exa', 'dis', 'per', and 'clu' ports.

The workflow is connected by lines, showing the flow of data from one step to the next. The 'Performance' box is the final step in the workflow.

```
Cluster 0: 366 items
Total number of items: 366
```

Operador: k-means

```
Cluster 0: 65 items
Cluster 1: 88 items
Cluster 2: 65 items
Cluster 3: 69 items
Cluster 4: 79 items
Total number of items: 366
```



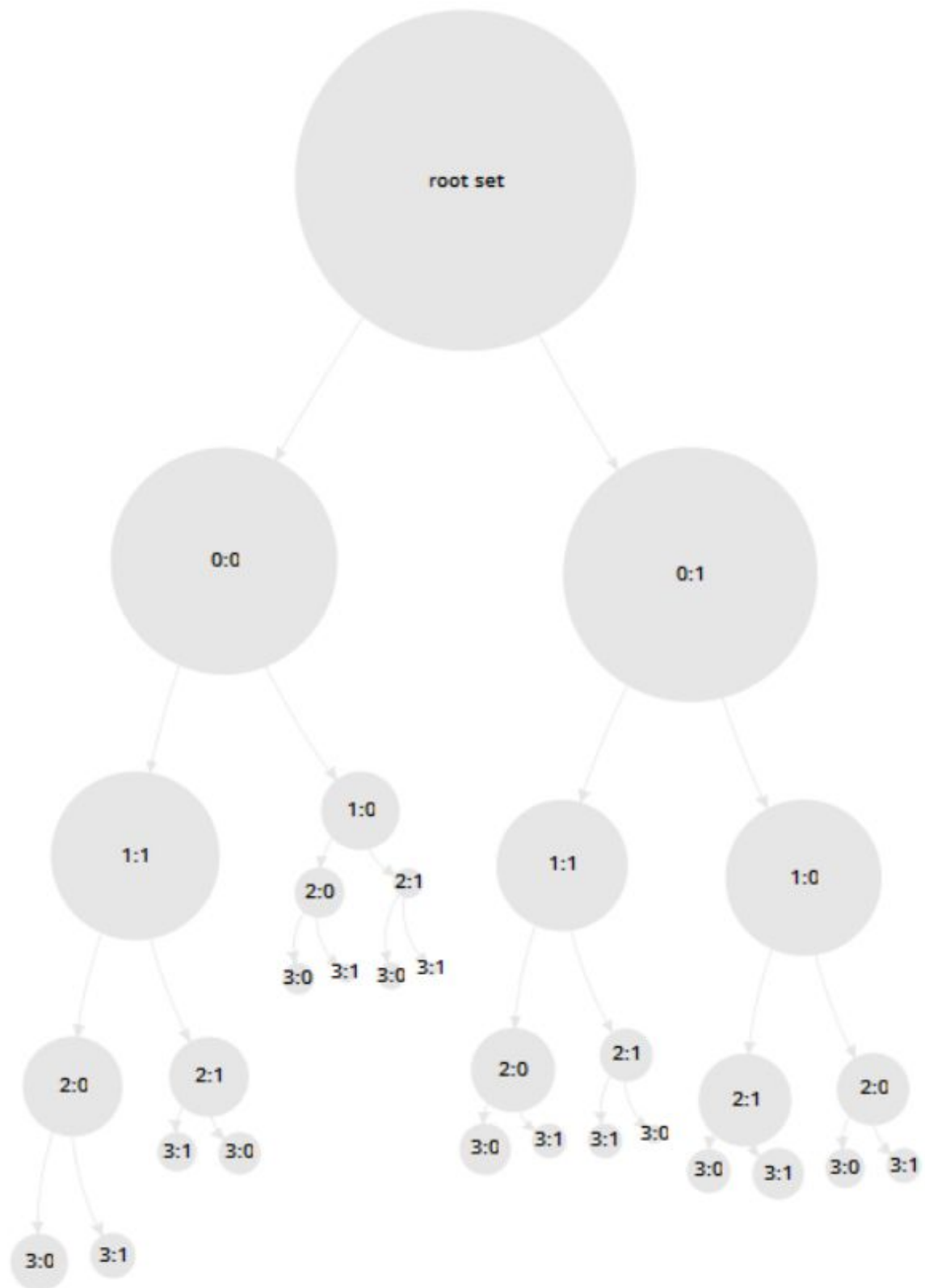
Por otro lado, utilizando este modelo se produce una agrupación de cinco clusters, con una cantidad balanceada en cada uno.

Operador: Top-down Clustering

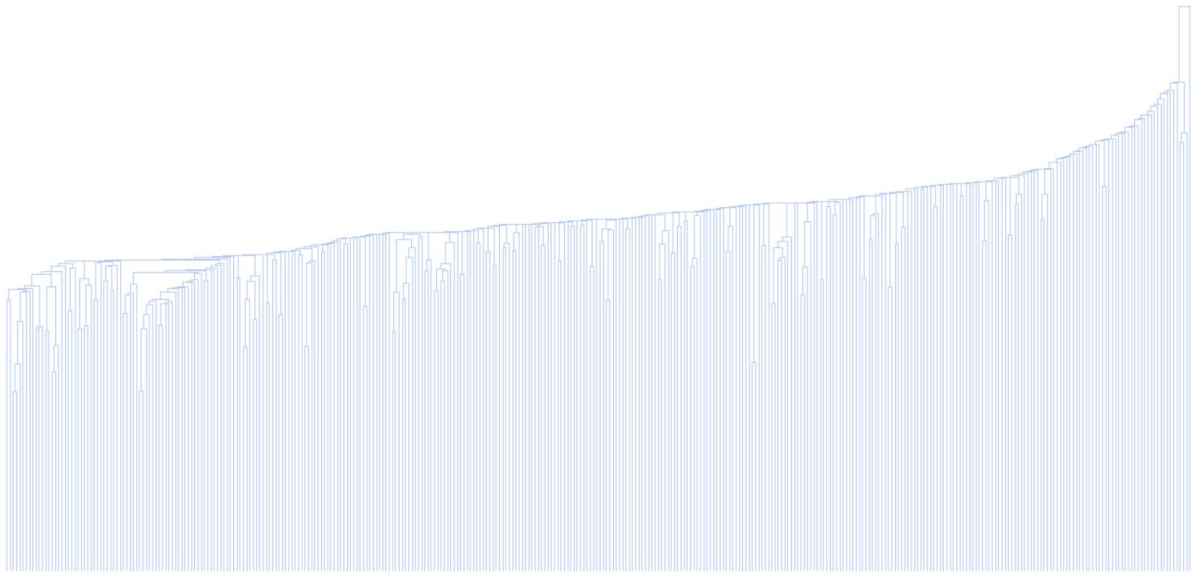
Hierarchical Cluster Model

Number of clusters :31

Number of items :366



Operador: Agglomerative Clustering



En este caso, la cantidad de cluster es superior a la cantidad de ítems. Esto puede deberse a que los clusters no sean exclusivos, siendo el caso de clusters que se superponen y cada ítem sea un cluster y configure más clusters con otros ítems, perteneciendo a uno o más.