

irisAnalysisApp - the Iris Dataset Analysis Application

The Coursera Developing Data Products Course Assignment

K-means and **Gaussian mixture models** are two canonical approaches to clustering, i.e. dividing data points into meaningful groups. The irisAnalysisApp application compares the two methods of clustering on the Iris dataset.

The left part of the screen is dedicated to the K-means method and the right part to the Gaussian mixture models method.

Each part is divided into three sections. From the top:

- **Parameters**

Method: K-means

X Variable
Sepal.Length

Y Variable
Sepal.Width

Number of observations
150

Number of clusters
3

Re-run simulation

Method: Gaussian mixture models

X Variable
Sepal.Length

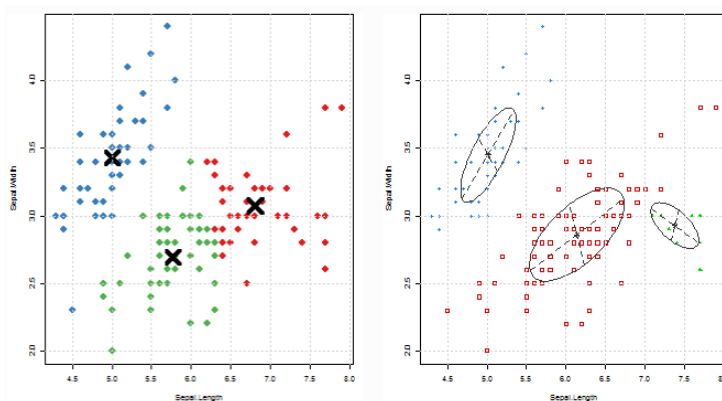
Y Variable
Sepal.Width

Number of observations
150

Number of clusters
3

Re-run simulation

- **Plot**



- **Performance information**

Computation time: 0 [ms]

Computation time: 18.08 [ms]

Section: **Parameters**

This section provides a control panel for the user. It consists of a set of parameters that affect the operation of the algorithms. These parameters are:

- X Variable -> The first variable (column) used by the algorithm
- Y Variable -> The second variable (column) used by the algorithm
- Number of observations -> Number of observations from the beginning of the data set. It should take the integers from the number of clusters to the number of observations in the Iris dataset (150)
- Number of clusters -> Number of clusters to split

Changing any parameter will automatically launch simulations and refresh the sections below. Restarting simulation is also possible after pressing the "Re-run simulation".

Section: **Plot**

This section presents in graphical form the distribution of elements on the individual clusters. A characteristic feature of belonging to the cluster is color, and in the case of method Gaussian mixture models also the shape of the element.

Section: **Performance information**

In this section it is presented the computation time in milliseconds.