Intelligent data analysis (Data Mining)

Individual task. Clustering

Draw up in the form of a report.

1. Read data from file.
2. Determine the best number of clusters:
   a. using the elbow method;
   b. using some indexes (R implemented 30 indexes in NbClust package).
3. Cluster data into the optimal number of clusters using hierarchical clustering methods (using euclidiaan and manhattan distance and average between groups linkage method).
4. Cluster data into the optimal number of clusters using k-means methods.
5. Cluster data using self-organizing map (Kohonen map).
6. Visualize all clustering result.