

The data to be analysed includes information from a telecommunications operator. A problem in this business is customers who leave the operator for a competitor (customer churn), since the cost of attracting a new customer is much higher than the cost of retaining customers.

The data set to be analysed includes some demographic data of customers as well as information about the contract established.

1. Start by loading the data ("Churn_DataSet.csv").
2. Make the necessary pre-processing tasks to the dataset for developing the models below.
3. Create the training and testing datasets (80% / 20%) stratified.
4. Develop Churn: Yes/No prediction models using the cross-validation method (cv=10) with the following algorithms:
 - a. Logistic Regression
 - b. Decision tree
 - c. Naive bayes
 - d. KNN
 - e. SVM
5. Evaluate the performance of various algorithms on the test set.
6. Create a MLP network and optimize its configuration to predict the Churn: Yes/No attribute.
7. Create an MLP network and optimize its configuration to predict the MonthlyCharges attribute.