

## **MLT Task #1:**

1. Train 4 different classifiers using sklearn library to predict "Activity" (biological response of the molecule) field from the "bioresponse.csv" dataset:

- small decision tree;
- deep decision tree;
- random forest on small trees;
- random forest on deep trees;

Refer to 'Random\_Forest.ipynb' and 'Decision\_Trees.ipynb' notebooks for examples. Split the data to train and test as 75% / 25%.

2. Calculate the following metrics to check the quality of your models:

- precision;
- recall;
- accuracy;
- F1-score;
- log-loss;

3. Plot precision-recall and ROC curves for your models.

4. Train a classifier who avoids Type II (False Negative) errors and calculate metrics from p.2 for it.

**Recall for it should be larger than 0.95.**