

## **Lab 4**

# **Modelling and Overfitting**

### **GOAL**

To train models from prepared data.  
To assess the model's performance.

### **WORK TO BE DONE**

To train models with the following techniques on the prepared data:

- Naïve Bayes
- Logistic regression
- KNN
- Decision trees
- Multi-layer perceptron
- Random forests**
- Gradient boosting or XGboost.**

### **REPORT TO DELIVER**

PDF file only with charts and tables. No analysis or justification is needed at this point.

Description of the best model trained for each technique – hyperparameters found.

Performance results of each one of the best models:

Accuracy; Precision; Recall; Others, if needed.

Suggested charts per technique:

- Hyperparameters study.
- Best model's performance.
- Overfitting study.
- Variables' importance when possible.
- Model learnt, when possible.
- Comparison of results between baseline and improved models.

**Good work!!!**