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Testing One Class Classifiers

The one class classifier was tested with different classifiers, parameters such as rejection rate. The result are the following:

BayesNetNomGaussBot1-3rate-18F.csv a few seconds ago by Carlos A One class classificator detecting class Bot with 1/3 rejecttion rate. Classifier: Bayes Net, Nominal generator, Gaussian Generator: All attributes.	0.64907
RanForestNomGaussBot1-3rate-18F.csv 5 hours ago by Carlos A One class classificator detecting class Bot with 1/3 rejecttion rate. Classifier: Random Forest, Nominal generator, Gaussian Generator: All attributes.	0.62323
RanForestNomGaussHuman2-3rate-18F.csv 5 hours ago by Carlos A One class classificator detecting class Human with 2/3 rejection rate. Classifier: Random Forest, Nominal generator, Gaussian Generator: All attributes.	0.55816
RanForestNomGaussHuman2-3rate-18F.csv 5 hours ago by Carlos A One class classificator detecting class Human with 2/3 rejecttion rate. Classifier: Random Forest, Nominal generator, Gaussian Generator: All attributes.	0.50000
RanForestNomGaussHuman2-3rate-18F.csv 5 hours ago by Carlos A One class classificator detecting class Human with 1/3 rejecttion rate. Classifier: Random Forest, Nominal generator, Gaussian Generator: All attributes.	Error 🛈
RanForestNomGaussHuman.csv 5 hours ago by Carlos A One class classificator detecting class Human. Classifier: Random Forest, Nominal generator, Gaussian Generator: All attributes.	0.52399
RanForestNomGaussBot.csv 5 hours ago by Carlos A One class classificator detecting class Bot. Classifier: Random Forest, Nominal generator, Gaussian Generator: All attributes.	0.60087
BaggingNomGauss-18F.csv 5 hours ago by Carlos A One class classificator detecting class Bot. Classifier: Bagging w Rep Tree, Nominal generator, Gaussian Generator: All attributes.	0.52804

Conclusion

As we can see, the effectiveness of the classifiers is lower when using the one class scheme. It is even lower when trying to identify humans, this may be due to the imbalance in the training set. As we have instance from both classes, it is better to use the multi class approach.