**Future Work**

Further work could be done to test the change in accuracy of our model combining existing selected features with predictors extracted using autoenconders. Our analysis shows that there’s a strong tendency of complex models to exhibit high variance and overfit. Ensembles based learning techniques have been tried to mitigate this issue with Adaboost showing the best results. More research could be done exploring state of the art complex classification algorithms in the area of Deep Learning in conjunction with dropout or regularization techniques to improve generalization.

This research focused on impersonation attacks. It would be interesting to extend our work to different kinds of intrusion techniques analyzing to what extent the features and the algorithms selected for impersonation attacks remain effective. The analysis of the test set revealed substantial differences with the training set, perhaps reflecting ever changing intrusion techniques. Further research could be done to look into the robustness of our methodology in the face of different datasets.