Final Project Participation Report

Team HDR: Hasibul Jishan, Daniel De Las Heras, and Ryan Pittman

Monday, December 18, 2023

Our group met over Zoom to work on our Python code, final project report, and final presentation. This week we focused on running additional machine learning models and comparing their accuracy scores to the ones already run. For instance, in our final week, Daniel ran various models such as random forests, Gradient boosting, XGB classifier, Cat boost, and LGBMC classifier. We then compared these accuracy scores with the logistic regression models, decision trees, K nearest neighbors, and Bernolli Naive Bayes models we ran last week.

Daniel ran all the models 1000 times to obtain a more robust estimate of the model's performance, and the final result is the median accuracy across all our models which were finely tuned. Following an in-depth analysis and comparison of these models, we collectively reached the conclusion that Logistic Regression demonstrated the most favorable results among all models considered. Logistic Regression emerged as our top-performing model. The second-best performer in our assessment was the LGBM Classification, closely followed by the XGB Classification as our third-best model.

In the process, Ryan played a crucial role in organizing the essential information from our codes in Jupyter Notebook and Google Colab, contributing significantly to the completion of our final report. Meanwhile, Hasibul focused on crafting the write up, ensuring that each team member's contributions were accurately documented and summarized. Ryan and Hasibul worked collaboratively on the creation of our final presentation for Netrality as well.