Project 3 Executive Summary

Donald Trump could be considered one of the most arguable US presidents so far. His background is significantly different than the previous 45 US presidents. In 2016, he became the US president with surprise, which immediately pushed many Americans into 2 groups with conflict opinions. As the conflict became more obvious in the society, many extremists began to appear and spread through social media.

It is important to identify some extreme and toxic posts on social media before it could be spread out to the public. In order to do so, a classification model is a fitting solution to identify the source of the posts.

In this project, I used posts from 2 subreddits, one with pro-Trump views, the other with anti-Trump views, and trained 3 models using logistic regression, and voting classifier to identify the source of each posts. By using TFIDFVectorizer and CountVectorizer as transformer and Logistic Regression and Voting Classifier, with Adaboost, Gradient Boost, and Random Forest. By splitting data into 70% training and 30% testing and applying cross validation, we received average training accuracy at 92% - 93% and testing accuracy 91% - 92%.

The classification model enables us to identify which subreddit a post comes from, which achieves the first step of reducing toxic posts on social media by identifying the source page. In later stage, we could add more variety of posts to train the model and acquire higher accuracy and broader functionality of the model.