

TikTok Claims/Opinions Classification Machine Learning Project

Executive Summary

Overview

The TikTok data team has been tasked with creating a machine learning model to aid in predicting whether a video is a claim or opinion. Taking into account previous investigations on the dataset the data team is confident that the developed machine learning model will satisfy the performance requirements.

Problem

Considering the sheer volume of user reports videos on TikTok receive it is not feasible to have the reports be reviewed by humans. Between opinions and claims videos that make claims are much more likely to be violating TikTok's terms of service therefore being able to prioritize the review of claims is imperative. This is why being able to distinguish between videos is important for TikTok

Solution

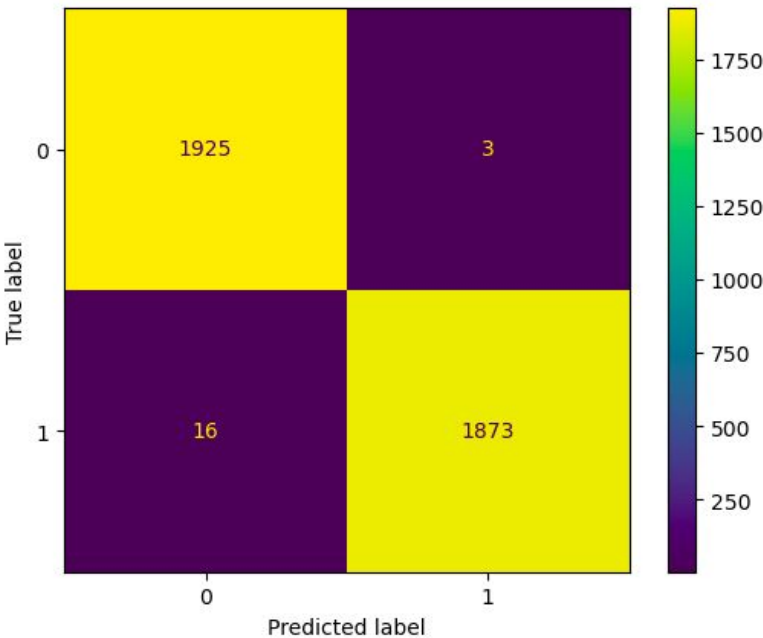
Two classification models were built and made predictions based on a held-out validation dataset. Both models performed extremely well but the model with the better recall score was deemed to be the better performing model. This model was then used to score a testing dataset in order to gauge future performance

Details

The two models developed were a random forest model and a XGBoost model, both models performed exceptionally well. Based on the circumstances and implications of having false negative results the scoring metric we wanted to pay attention to is the recall score. This is why the random forest model was deemed the champion model, it had a higher recall score.

Out of 3817 samples from the testing hold out data only 19 were misclassified, this is a very good performance.

The primary predictors were all related to video engagement, this tells us that videos with higher user engagement are more likely to be claims as opposed to opinions.



Next Steps

Although the model performed well it is recommended that before it be deployed further evaluation be conducted using other aspects of user data. Alongside the further evaluation it is recommended that user engagement levels are monitored to avoid any issues that may arise due to fluctuations in the model's most predictive features.