TikTok Claims Classification Project

Results of Machine Learning Models
All code at https://github.com/izsolnay/TikTok_Python

OVERVIEW

Objective: Develop a robust machine learning model which effectively and efficiently classifies TikTok claim reports to streamline their processing and reduce backlog

Steps taken by data team:

➢ Data was organized, analyzed, explored, and structured for insights and model building

➢ A strong logistic regression model was built which achieved an 82% recall score

➢ Two tree-based models were built, with the winning XGBoost model achieving a near perfect prediction rate

PROJECT STATUS

The data team:

➢ Built two tree-based classification models to predicate the `'claim_status'` of a video

➢ Tested both models on a validation dataset

➢ Tested winning model on the test data

➢ Evaluated the winning model

Result: the winning XGBoost model is exceptionally robust. It achieved a recall score of 99%

Recall	Precision	Accuracy	F1
0.99	1.00	0.99	0.99

and a near 100% accuracy across all prediction thresholds:

```
roc_auc_score: 0.9970884
```

NEXT STEPS

The model performed exceptionally well on both the held out validation and test data sets. Because of its high recall score, the XGBoost model is extremely robust at identifying Claims videos from Opinions videos. It is confidently recommended that this model go into production.

Moving forward, the team advises:

➢ The investigation of the variables `'video_transcription_text'` and `'text_length'` to discover if further insights could be brought to light on users' interactions with videos of differing statuses

➢ The monitoring of the most predictive variables for their continued predictive powers

KEY INSIGHTS

Understanding Text Length

The median length of a Claims video is 13 characters longer than an Opinions video

Video transcription text length by claim_status
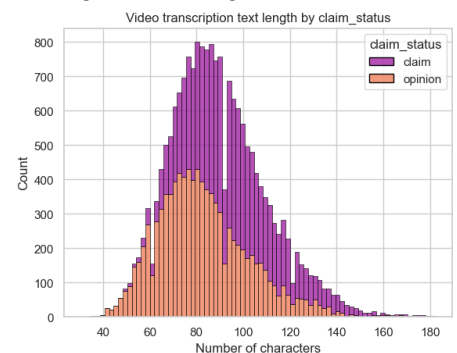
Understanding Predication Variables

Primary predictors were the related variables:

➢ `'video_view_count'`

➢ `'likes_per_view'`

The created feature `'text_length'` (above) and categorical feature `'author_ban_status'` had the next most powerful predictive signals.

Little to no impact on predictability were:

➢ `'video_download_count'`

➢ `'video_share_count'`

Feature importance