TikTok project: detect claims and opinions

Milestone #4: Logistic regression

Overview

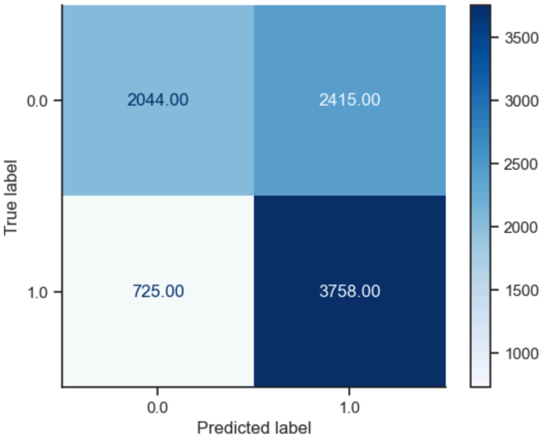
The objetive of this project is to implement a machine learning model to classify the videos uploaded to TikTok into claims (unsourced statements) and opinions (personal thoughts) in order to reduce moderating times and reduce economical costs.

Objective

The objective of this milestone was to evaluate **how video features relate to the verification status** of the users. For this purpose, we implemented a logistic regression model and we evaluated the coefficients associated to each independent variable. We followed a simple train-test split approach. We evaluated the multicollinearity of the variables to comply with the logistic regression model assumptions.

Results

- From the coefficients of the logistic regression model: the video duration and the comment count are the two variables which most influence the outcome variable.
- Every second of the video duration increase the log odds of the probability of an user being verified by 0.009 (considering the rest of the independent variables are held constant).
- Therefore, **longer videos tend to be associated with higher odds of the user being verified.** In the case of the comment count, each additional comment reduces the former log odds by 0.0004.
- The logistic regression models predicts the outcome variable *verified_status* with **higher accuracy than random choice** (0.65 vs 0.5)



```
              precision    recall  f1-score   support

    verified       0.74      0.46      0.57      4459
not verified       0.61      0.84      0.71      4483

    accuracy                           0.65      8942
   macro avg       0.67      0.65      0.64      8942
weighted avg       0.67      0.65      0.64      8942
```

Next Steps

The next step is to **construct a classification model that will predict the status of claims made by users.** That is the final project and original expectation from the TikTok team. Now, there is enough information to analyze the results of that model with helpful context around user behavior.