Claims Classification Project
(Milestone 4)

Statistical Testing Results - Prepared by PhD Aleksandar Osmanli

Project Milestone Overview

The client seeks to develop a machine learning model to assist in the classification of claims for user submissions. In this part of the project, I conducted a hypothesis test to analyze the relationship between ‘verified_status’ and ‘video_view_count’ variables.

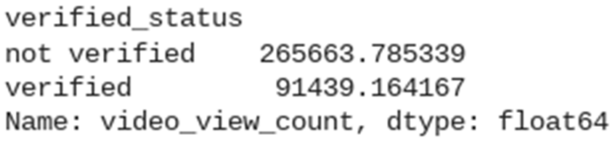
Key Insights

- The analysis shows that there is a difference in number of views between videos posted by verified accounts and videos posted by unverified accounts.
- As a result, these findings suggest there might be fundamental behavioral differences between these two groups of accounts: verified and unverified.
- It would be interesting to investigate the root cause of this behavioral difference. For example, I consider:
  - Do unverified accounts tend to post more engaging videos? Is that engaging content a claim or opinion?
  - Or, are unverified accounts associated with spam bots that help inflate view counts?

Details

I considered the relationship between ‘verified_status’ and ‘video_view_count’.

One approach conducted was to examine the mean values of ‘video_view_count’ for each group of ‘verified_status’ in the sample data. The findings showed that unverified accounts have a mean of 265,663 views vs. 91,439 views for verified accounts



```
verified_status
not verified    265663.785339
verified         91439.164167
Name: video_view_count, dtype: float64
```

The second approach was a two-sample hypothesis test. Aligned with preliminary findings from the mean values, this statistical analysis shows that any observed difference in the sample data is due to an actual difference in the corresponding population means.

Next Steps

I suggest moving forward and building a **regression model** on ‘verified_status’.

A regression model for ‘verified_status’ can help analyze user behavior in this group of verified users. Then, this context can be used to consider results from a claim classification model that will be created afterwards.