VISHNU INSTITUTE OF TECHNOLOGY

SENTITHON-2022

SENTIMENT ANALYSIS

Meet Our Team

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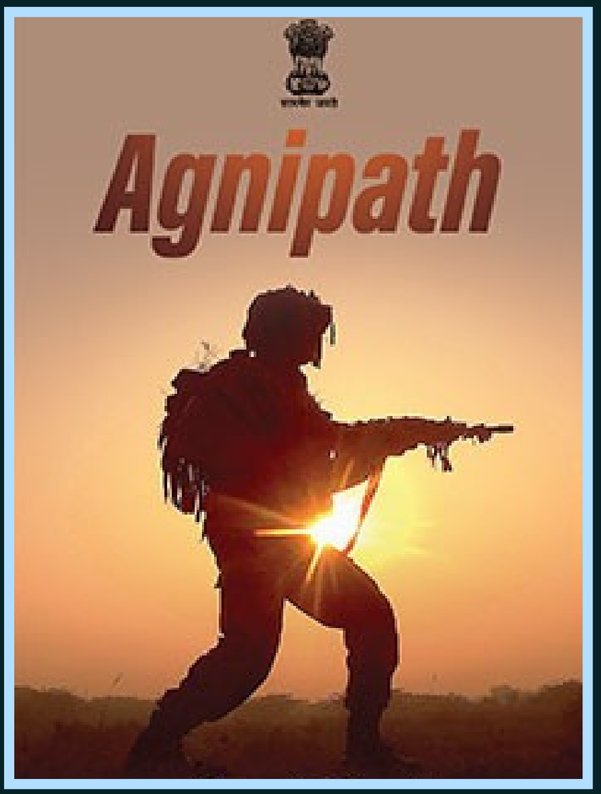
Problem Statement

Build a pipeline that extracts the social media posts on a specified topic, performs data cleaning, identifies the sentiment, and summarises the public opinion on the topic.

Theme

#agnipath - Recent Indian government initiative

- Recently Agnipath was the most controversial scheme which was proposed by our indian government for Indian army recruitment.
- Most of the people who were willing to join in the indian army raised their voice through social media platforms like Twitter, Facebook etc.
- By using hashtags like #Agnipath and #agniveer, made it as a trending topic around the twitter.



Solution Approach

Gathering Data Set

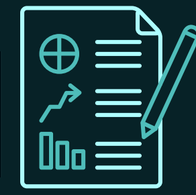
Importing Libraries

Data cleaning

Finding Sentiments

EDA &Handiling Unbalanced Data

Different Models



Predictions

Data Collection

- We used SNSCRAPE package to get the tweets of certain hashtags like #agnipath ,#agniveer from twitter.

Importing Libraries

- We used pandas, numpy, keras, transformers,sklearn etc.

Data Cleaning

- we cleaned the data by using re module, by removing stop words and by removing emojis etc.

Finding - sentiments

- We used TRANSFORMERS for finding sentiments.
- We can even also use TEXTBLOB module for finding sentiments through polarity and subjectivity.

- We performed EDA on the data through which we found that our data is unbalanced.

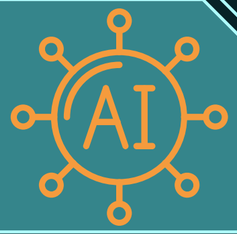
Exploratory Data Analysis

- we used RandomOverSampling to make unbalaned data into balanced data. We also used text augmentation to do the same.

Handiling Unbalancd Data

- We did Sentiment Analysis using Bag of Words Vectorization model and BERT models.

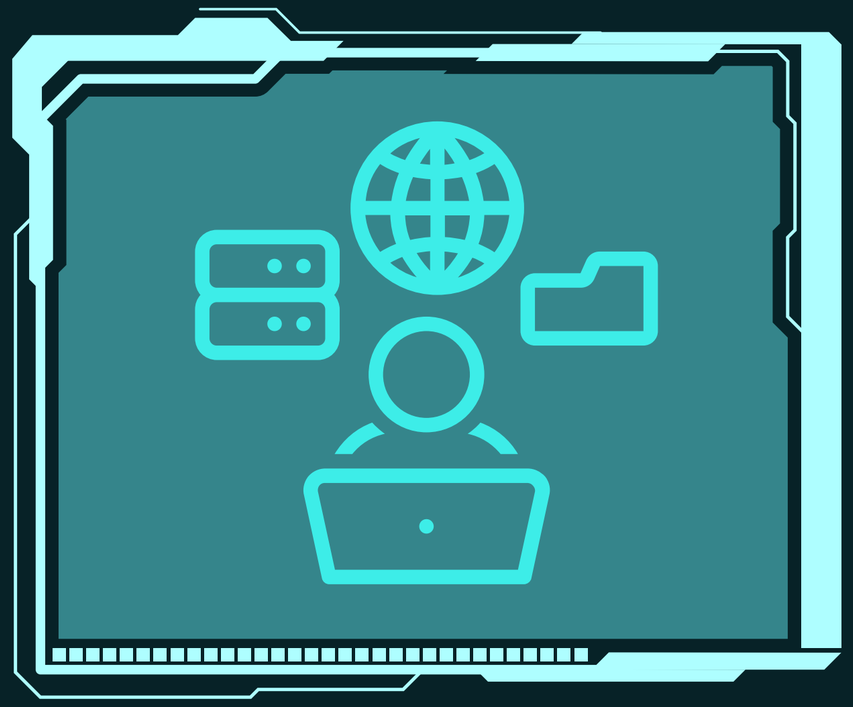
Models



- BERT model is comparatively better

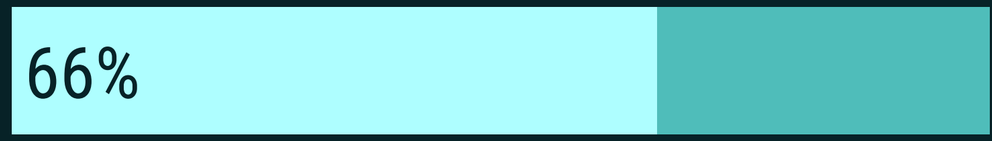
Predictions

TECHNICAL ARCHITECTURE

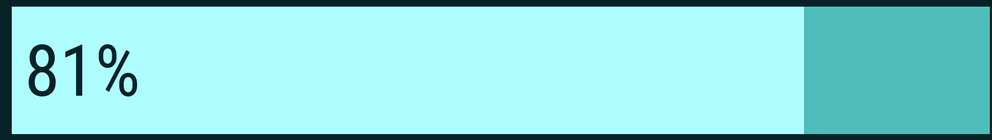


Accuracies of various models

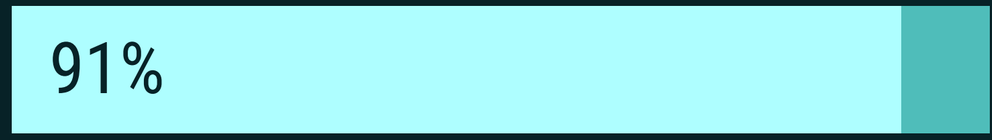
MNB



Logistic Regression



BERT



CONCLUSION

Github Repo :

https://github.com/duvvusuribabu/Sentiment-analysis