

Note :- If github link does not work please copy and past it in browser

Explanation :-

Github link :- <https://github.com/mandylegend/News-Sentiment-Analysis-.git>

Important Liabraies :-

```
import requests
import pandas as pd
import nltk
import string
from nltk.corpus import stopwords
from nltk.sentiment.vader import SentimentIntensityAnalyzer
from transformers import pipeline
import streamlit as st
```

* Explanation of code :-

1. Preprocessing Function(preprocess_text)

- Punctuation Removal: Removes any punctuations marks.
- Lowercasing: Converts the text to lowercase for consistency.
- Stopword Removal: Removes common words using NLTK stopwords list.

2. Sentiment Models

- VADER: Uses VADER's sentiment analysis directly
- BERT: Uses Hugging Face's transformers pipeline for sentiment analysis
- TextBlob: TextBlob is a Python library for processing textual data
- Zero-Shot: A machine learning paradigm where a model can classify or recognize new, unseen objects
- Finbert : A pre-trained language model specifically designed for analyzing sentiment in financial text

What is VADER ??

- VADER (Valence Aware Dictionary and sEntiment Reasoner) is rule based sentiment analysis tool that is designed for analyzing social media text , newspaper text

What is BERT ??

- BERT (Bidirectional Representation for Transformers) By simultaneously examining both sides of a word's context, BERT can capture a word's whole meaning in its context. It processes input data bidirectionally, capturing both preceding and succeeding context.

What is textbolb

- TextBlob allows us to determine whether the input textual data is positive, negative, or neutral.

What is FinBert ??

- Finbert Finetuned on Financial PhraseBank; tuned for market tone (bullish / bearish / neutral)

What is Zero-shot ??

- Classify into any label set at run-time (e.g., “bullish / bearish / uncertain”) without extra training

3. Streamlit Interface:

- User can input a company name/keyword and choose between VADER or BERT for sentiment analysis.
- Displays news headlines, sentiment classifications, and a bar chart of sentiment counts.

4. How to run streamlit in Terminal:

- In terminal type
 1. (cd development phase) and press enter
 2. Then type Streamlit run app.py

5. How to run the app:

- I have shared screenshot pdf of tutorial in detail in interface_pdf_guide