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