

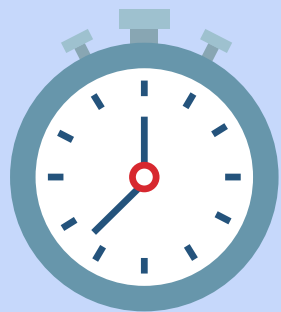
# MarketMood : A Stock Sentiment Analysis Tool

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## PROPOSED SOLUTION



**AI-Driven Sentiment Analysis:** Utilizes NLP techniques to analyze sentiment from various financial news articles and social media sites, enhancing accuracy and insights.



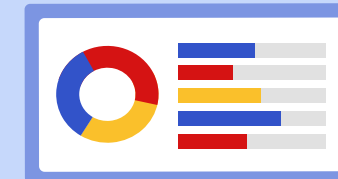
**Real-Time Analysis** for specific stocks or sectors, allowing investors to make timely decisions based on the latest news.



**Quarterly Time Horizon Segregation** for observing sentiment trends over time



**Keyword-Based Search:** Allows users to track sentiment trends for particular buzz-words, making the tool user-friendly and targeted.



**Visualise** the sentiment scores using tabular and graphical methods



**Push notifications** to the user whenever any major events occur like mergers, acquisitions, Hindenburg report release



User friendly website



Sentiment analysis of news data using  
News API and web scraping websites like  
Economic Times and MoneyControl



Keyword search



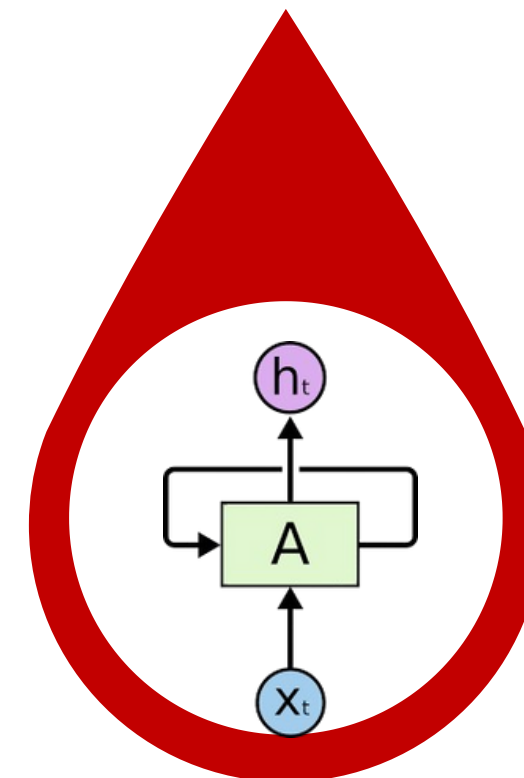
Sentiment analysis using Reddit api  
and displaying the sentiment scores



Stock Market Prediction using LSTM

Sentiment analysis  
models used:

1. VADER
2. FinBERT



## INNOVATIVENESS

- **Real time Analysis of news (taking data for the last 15 days) by using NewsAPI** and performing sentiment analysis using **VADER and FinBERT**. This results in great accuracy and sentiment scores.
- **Displaying top finance headlines and top stock picks by getting real time data from News Api and Alpha Vantage API**
- Taking Inspiration from the GameStop incident, **reddit sentiment analysis using VADER**. Here top subreddits are screened and posts are filtered according to **highest number of upvotes**.
- **Filtering news** based on relevance, release date and time, country of origin, etc and performing sentiment analysis according to priority.
- **Prediction model using Yahoo Finance Data and using LSTM model**.
- **Notifications** are pushed to user when some major stock market incident takes place like Hindenburg reports, mergers, acquisitions, etc.
- **Bookmarking system** provided so that the user can save shortlisted stock picks

## BUSINESS POTENTIAL

- **API-Based Sentiment Insights for Third-Party Integrations:** Developing an **API** that provides real-time sentiment analysis for various stocks; opens the **gateway to B2B** solutions that can be licensed to financial institutions for enhanced data-driven decision-making.
- **Social Trading and Community Features:** Creating a **social trading platform** where users can share their stock analyses, strategies, and **investment insights within a community**; leaderboards for top sentiment contributors, discussion forums, and sentiment-driven **investment challenges**.
- **AI-Driven Portfolio Management & Sentiment Tracking:** Offering AI-driven portfolio management, allowing users to track the sentiment of **multiple stocks** in their portfolio simultaneously; users can set notifications based on sentiment shifts, making the platform highly valuable to retail investors and portfolio managers.