

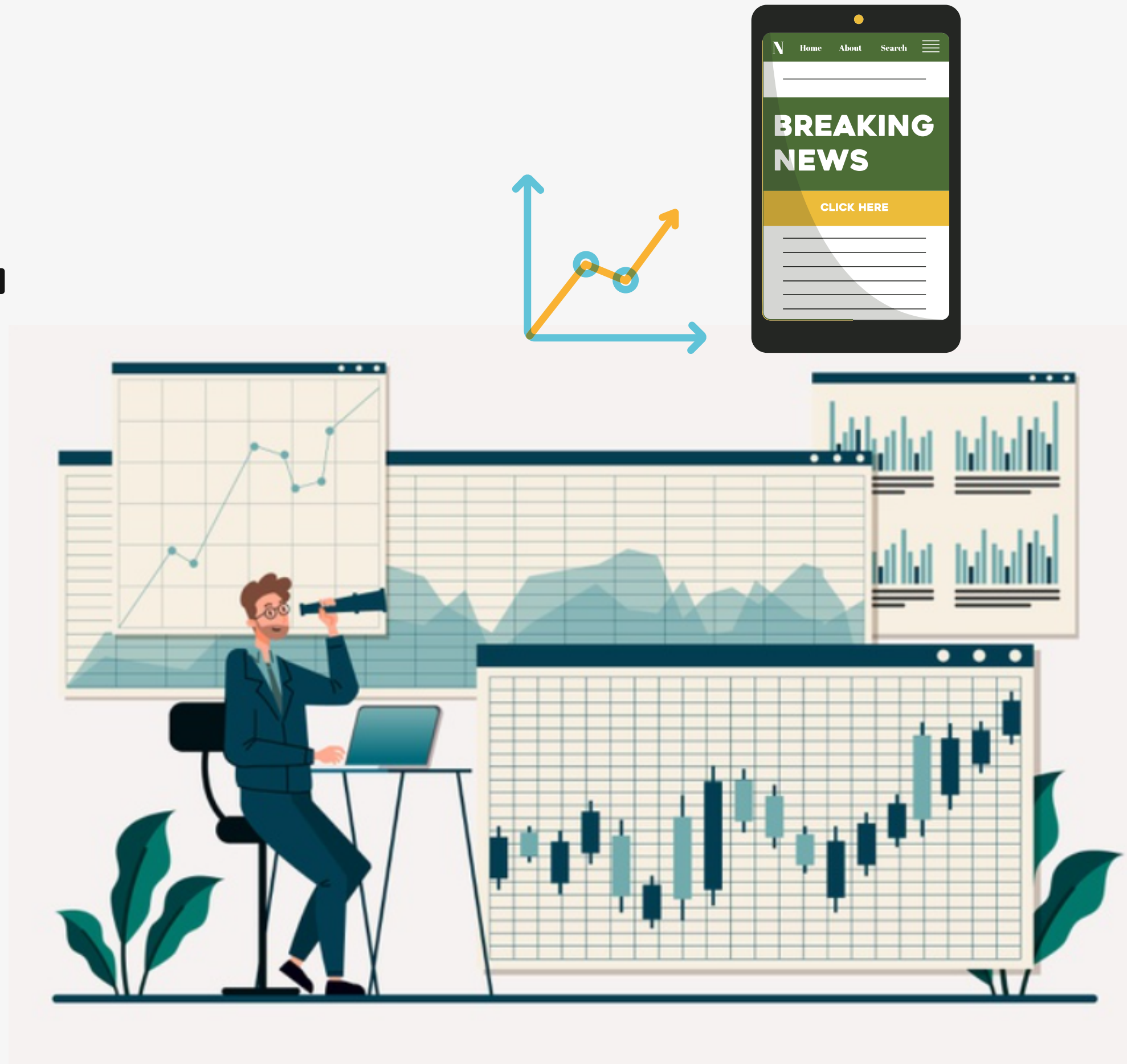


# EmoStock - Stocks Simplified

10TH OCTOBER 2020

01

Team Name : LCF 2.0



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# A RANDOM WALK DOWN WALL STREET



*The*  
TIME-TESTED  
STRATEGY  
*for*  
SUCCESSFUL  
INVESTING

BURTON G. MALKIEL



"Predicting the stock market is really predicting how other investors will change estimates they are now making with all their best efforts. This means that, for a market forecaster to be right, the consensus of all others must be wrong and the forecaster must determine in which direction—up or down—the market will be moved by changes in the consensus of those same active investors."

Burton G. Malkiel



# DISCUSSION POINTS

## Overview

Introduction

About Our Project

Approach

Features



# INTRODUCTION

## About the problem statement

Predicting how the stock market will perform is one of the most difficult things to do. There are so many factors involved in the prediction – physical factors vs. physiological, rational and irrational behavior, etc. All these aspects combine to make share prices volatile and very difficult to predict with a high degree of accuracy.

Stock market analysis is broadly divided into two parts – Fundamental Analysis and Technical Analysis.

**Fundamental Analysis** involves analyzing the company's future profitability on the basis of its current business environment and financial performance.

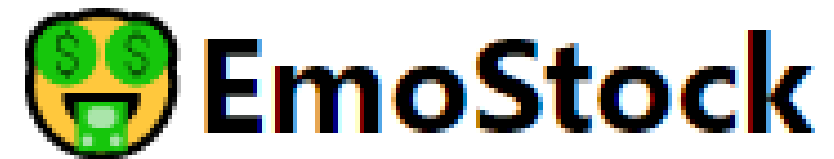
**Technical Analysis**, on the other hand, includes reading the charts and using statistical figures to identify the trends in the stock market.

Most conventional predictive models are highly dependent on the latter and are heavily reliant on crunching numbers and data, often taking into consideration of how the stock has performed over time or the history of similar stocks. This predictive model might be foolproof in a perfect world but in the real world, stock prices and growth/decline rates are often affected by other factors like news and media, which technical analysis often fails to take into account.





# ABOUT OUR PROJECT – EMOSTOCK



To tackle this very predicament, we wanted to build a model which not only takes into consideration the history of the stock, like all generic predictors do, but also the current happenings in the world through news and media sources. This is where Emostocks steps in, scraping news data from InShorts, a celebrated news source in real time, its predictive algorithms identify the named entities, perform sentiment analysis on the news headlines and link it to the particular stocks that might be affected by that news using keyword analysis of the news content.

# APPROACH:

- Scrape Daily News from Inshorts
- Perform Sentiment Analysis on news headlines using model trained on 8 years of Reddit News (r/worldnews) data.
- Identify the companies whose stocks might be positively or negatively impacted from the given headline using named entity recognition techniques.
- Display the effect of the headline on a particular stock.
- Display the various stocks in news on a particular day.
- Inbuilt stock tracker and notification system
- Financial report analysis to further substantiate the feasibility and profitability of an investment.



# FEATURES



## Stocks in News & news in stocks

Track both how a particular news headline affects a stock and which particular stocks are in news on any given day.



## Stock tracking

The stocks in news can also be tracked to monitor their financial performance on a particular day, based on the news.



## Email Notifications

The user is also notified when the price of a particular company's stocks are expected to fall or rise based on the current world news, via email.

# FEATURES CONTD.



## Annual financial report analysis

Financial reports are formal records of the financial activities and position of a business, person, or other entity. Relevant financial information is presented in a structured manner and in a form which is easy to understand. The annual financial report of a company is often a deciding factor for stock market enthusiasts and can give a clear indication of the future prospects of investment and the profitability of the stock.

Emostocks performs financial report analysis by first reading the report (in PDF) format and then converting it into text. This text is then parsed and financial numbers are pulled, collated and all the words present in the document are ranked by its frequency.

Then the written statements and financial tables are separated and sentiment analysis is performed on the written statements to get an idea of the current state of the company's finances and how profitable it is to invest in the stocks of the same.



# WHY EMOSTOCKS ?

## Easy navigation

The solution has been implemented in the form of a web-application that is easy to use and navigate.

## Trendy, intuitive design and user experience.

The design of the website has been prioritized by keeping the user at the center, making sure that both an amateur and a professional can use the website with ease.

## Relevant, authoritative website content

The website features news articles, their sentiments and the stocks the particular news affects in detail.

## Two way analysis

Can analyze both the internal and external factors that affect the price of the a particular stock, namely the financial news and the annual financial report to make sure the investment made is profitable.

## Secure E-mail login and notification system

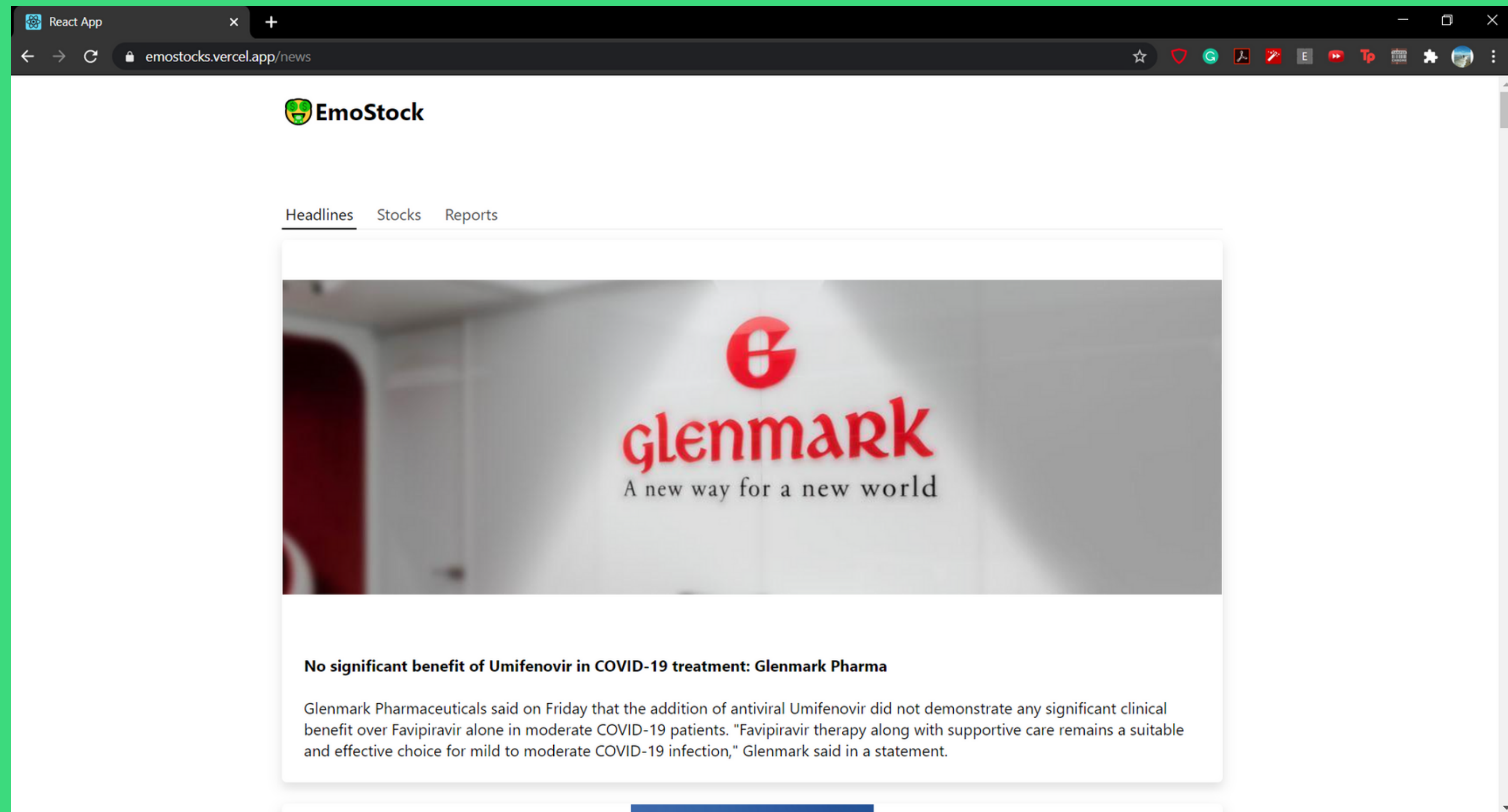
To make sure the users never miss out on any important updates.

## Convenience

Integrating everything into a single platform ensures that EmoStock is your one stop solution to profitable stocks.

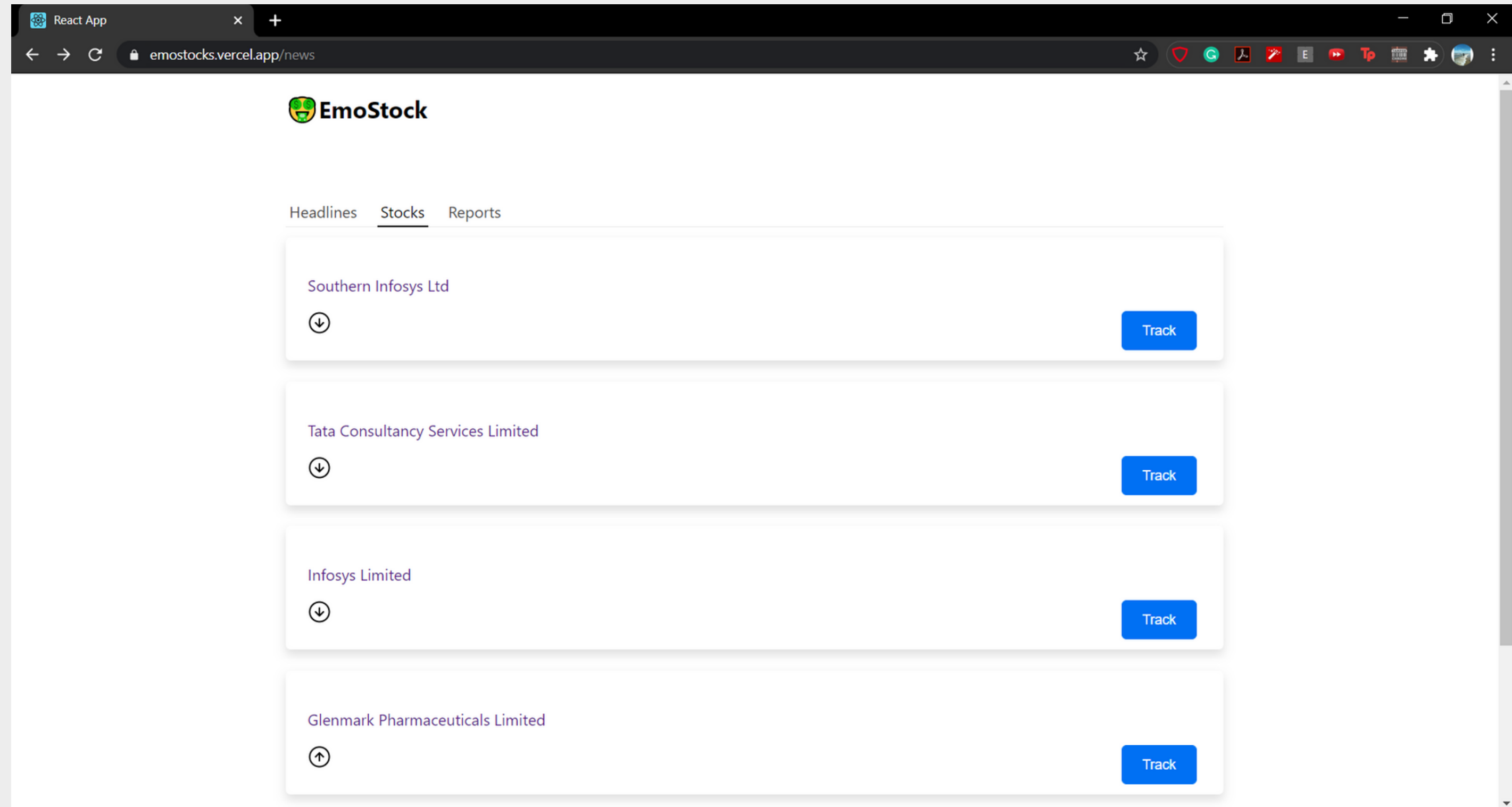
# PROJECT SNAPSHOTS

The 'headlines' tab enlisting all financial news headlines associated with stocks.



# PROJECT SNAPSHOTS

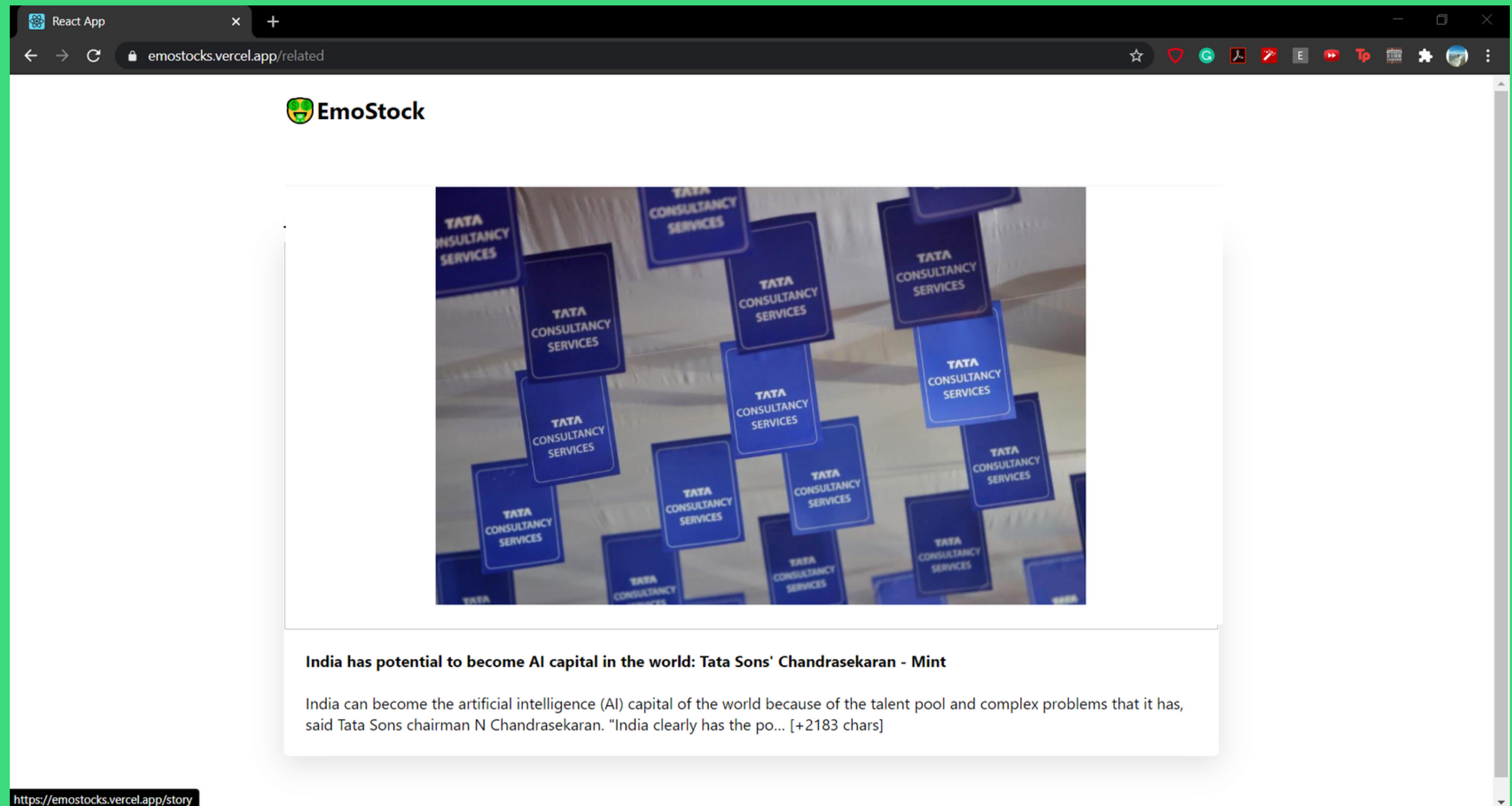
The 'stocks' tab enlisting all the stocks affected with these headlines with the arrow indicating a positive or negative affect.





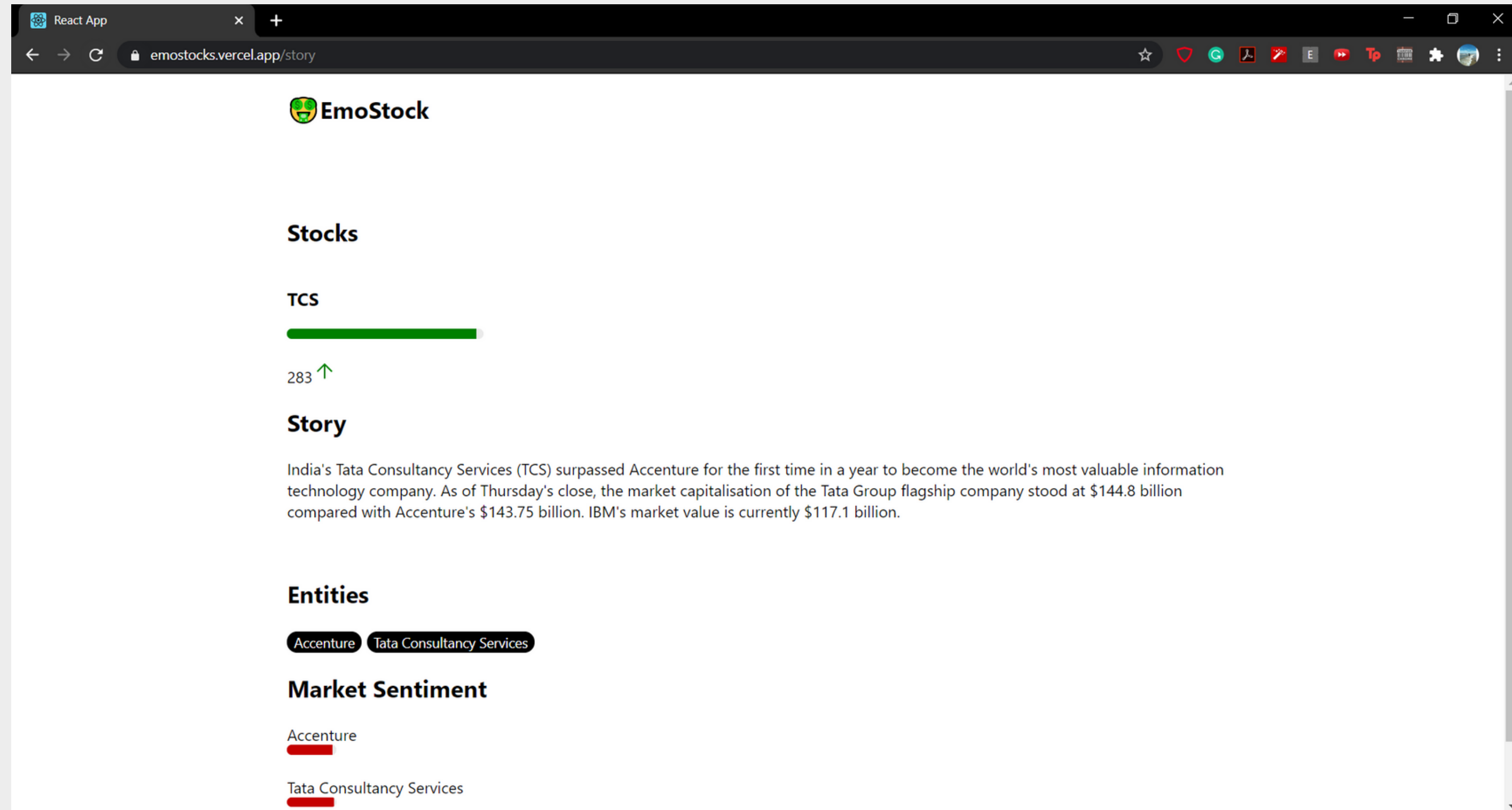
# PROJECT SNAPSHOTS

*After clicking on the particular stock from the 'stocks' tab (here TCS), we can track the exact news that is affecting the particular stock in a positive or negative way.*

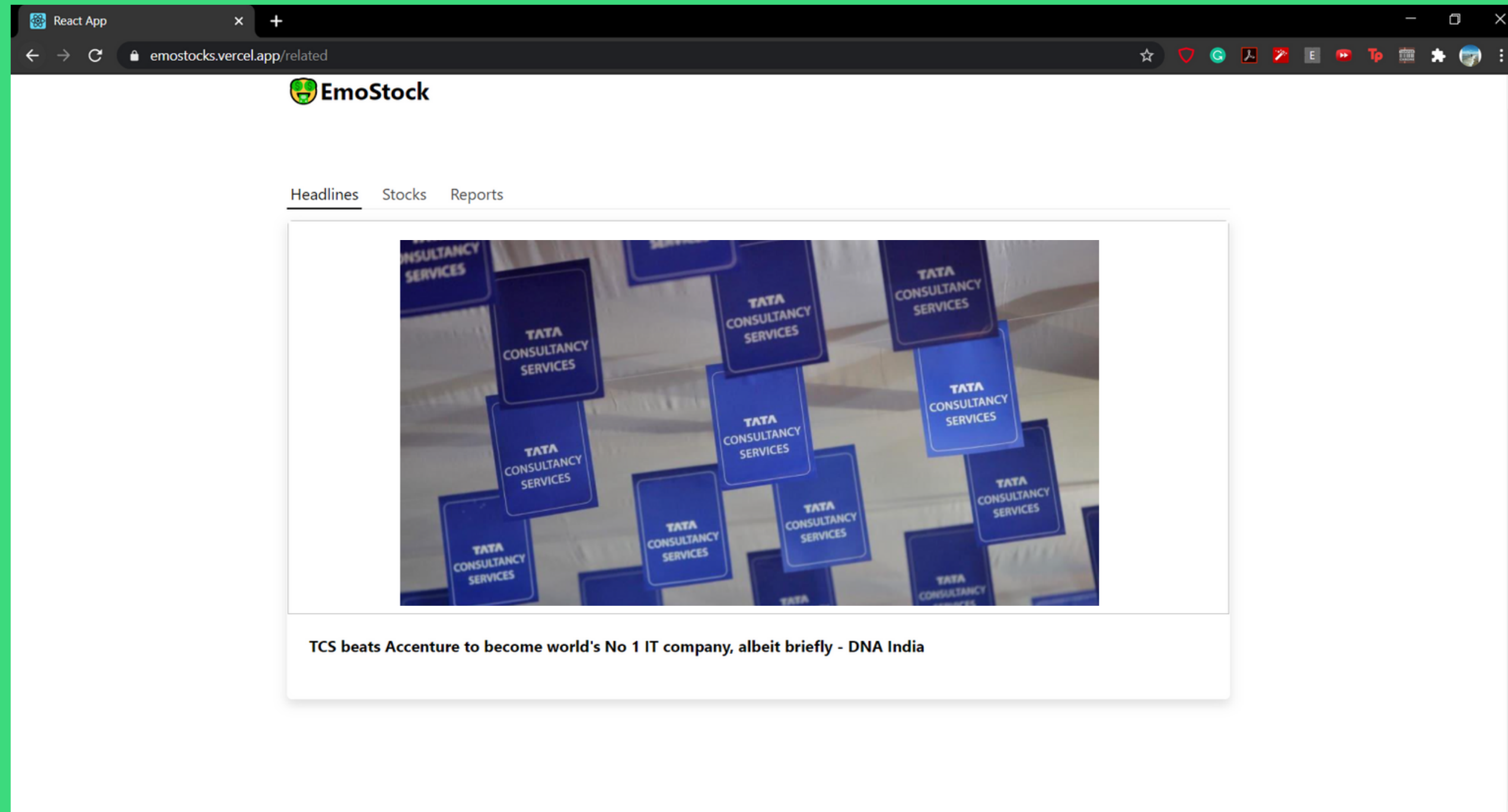


# PROJECT SNAPSHOTS

*We can also track the stock price, its general sentiment and the sentiment of the entities that are associated with the stock. The green bar indicates that the TCS stock is expected to rise.*



# PROJECT SNAPSHOTS

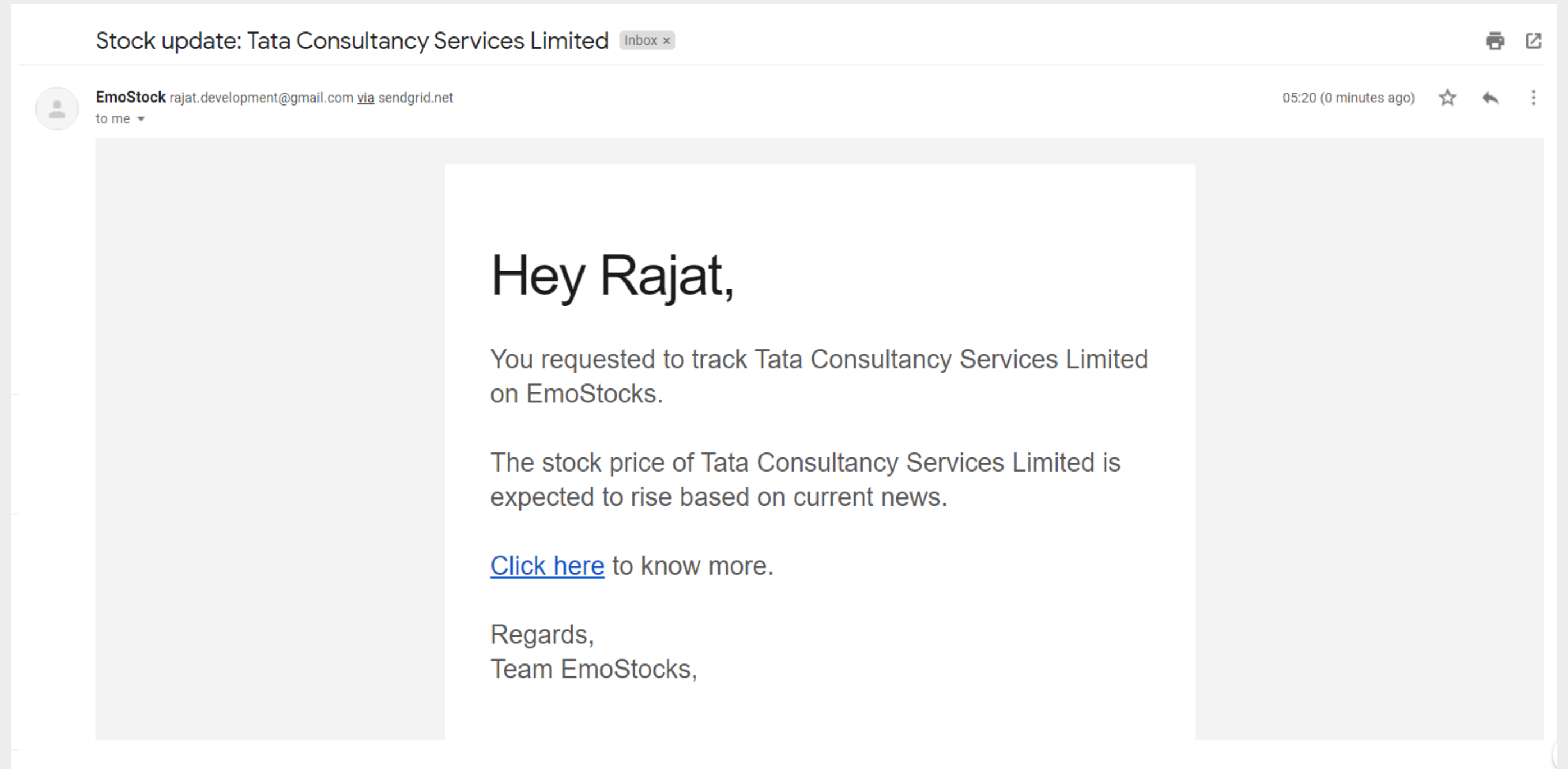


*We see that the stock of 'Accenture' is negatively affected as the stock of TCS rises, clicking on the entity will take us to the associated news article responsible for this affect.*



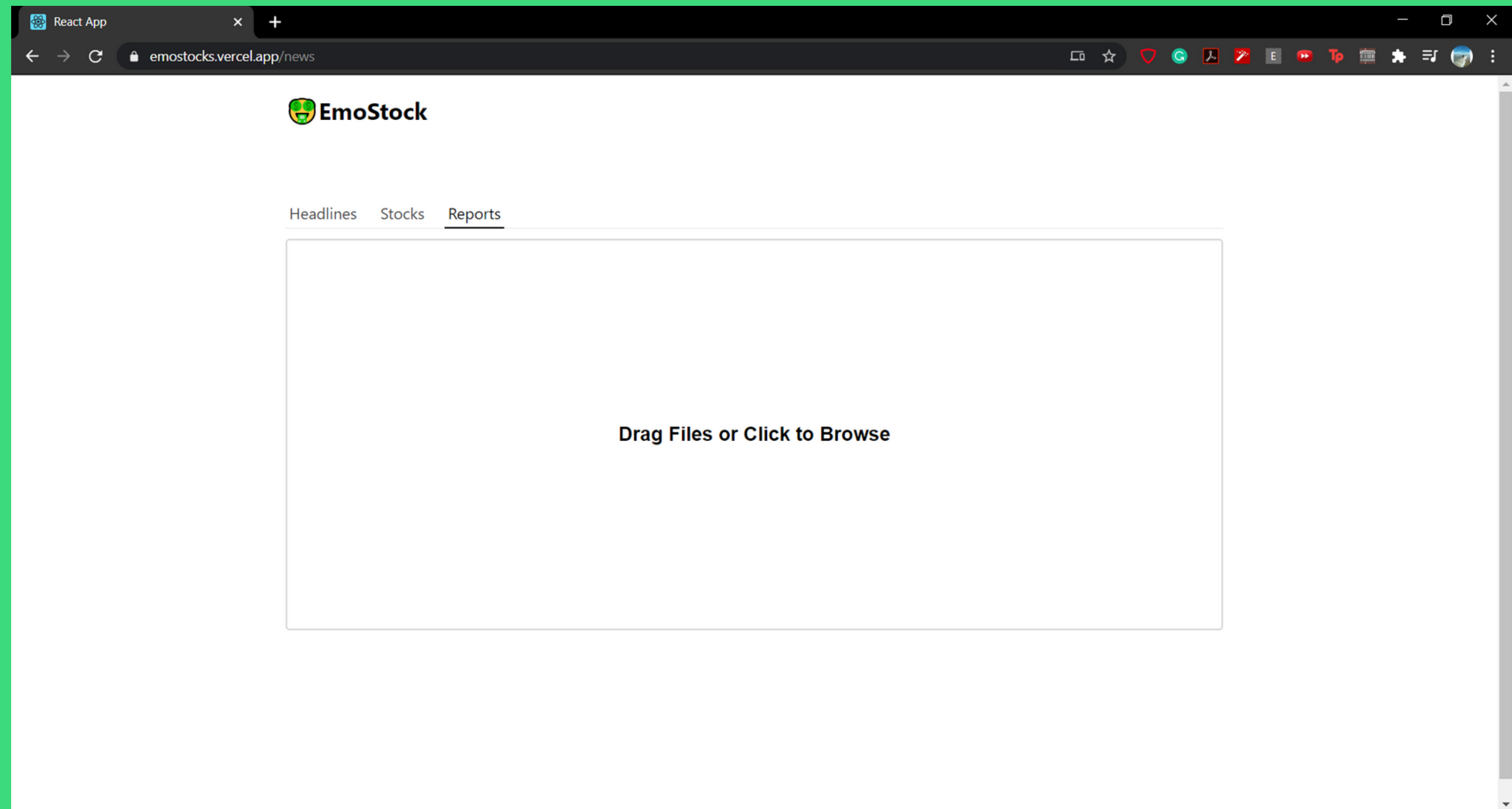
# PROJECT SNAPSHOTS

***We can track the stock of a particular company and the system then notifies us of the rise/fall in price of that particular stock.***



# PROJECT SNAPSHOTS

*Upload report  
here to get  
financial  
analysis.*



# Important Project Links

GitHub

Video

Website.

Links to submission videos,  
GitHub repository and project  
website.

Webapp : <https://emostocks.vercel.app/news>

Demo Video

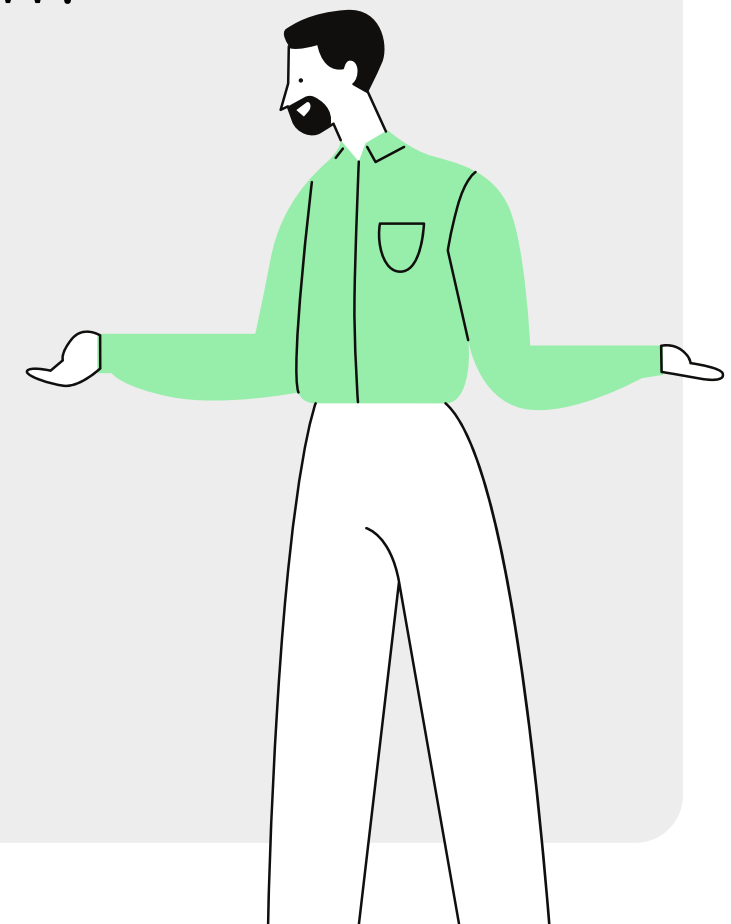
[https://drive.google.com/file/d/1Mh\\_BbRr8N9V4rqosm\\_4RSLgKpHIPoOV6/view?  
usp=sharing](https://drive.google.com/file/d/1Mh_BbRr8N9V4rqosm_4RSLgKpHIPoOV6/view?usp=sharing)

Pitch Video:

[https://drive.google.com/file/d/13GFTXsG0wceBYOspYwsbwuUEVpZswr  
hs/view](https://drive.google.com/file/d/13GFTXsG0wceBYOspYwsbwuUEVpZswrhs/view)

GitHub Repo : <https://github.com/PriyankVIT/EmoStock>

Fin.







**THANKS FOR  
YOUR  
ATTENTION!**

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