



# STONKS

Stock Market Simplified





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. physiologic factors, rational and irrational behavior, etc. All the aspects combine to make share prices volatile and very difficult to predict with a high degree of accuracy.

# Overview

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.



# The Problem

Most conventional predictive models are highly dependent on Technical Analysis 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.



# Our Solution

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 Stonks steps in, scraping news data from InShorts, a celebrated news source in real time. Stonks 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 IBM Watson's NLU Library
- 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

See all the relevant financial news on the homepage itself, the stocks associated with them, and the predicted stock price based upon our analysis.



## News in stocks

See all the stocks that might get affected due to a single day's 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.



## Crypto

Stonks also features latest news and price changes for all the major cryptocurrencies out there.



## Annual financial report analysis

Stonks 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 Stonks?

## Easy navigation

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

## 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 a particular stock, namely the financial news and the annual financial report to make sure the investment made is profitable.

## 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.

## Notification System

To send out email notifications to our valuable users if any of the stocks they are interested in is predicted to rise or fall.

## Convenience

Integrating everything into a single platform ensures that Stonks is your one stop solution to profitable stocks and cryptocurrencies



# THANKS FOR YOUR ATTENTION!

