

Sentiment Analysis for Stock Price

Claire Sun

1

Introduction

2

Design

3

Demo

4

Conclusion

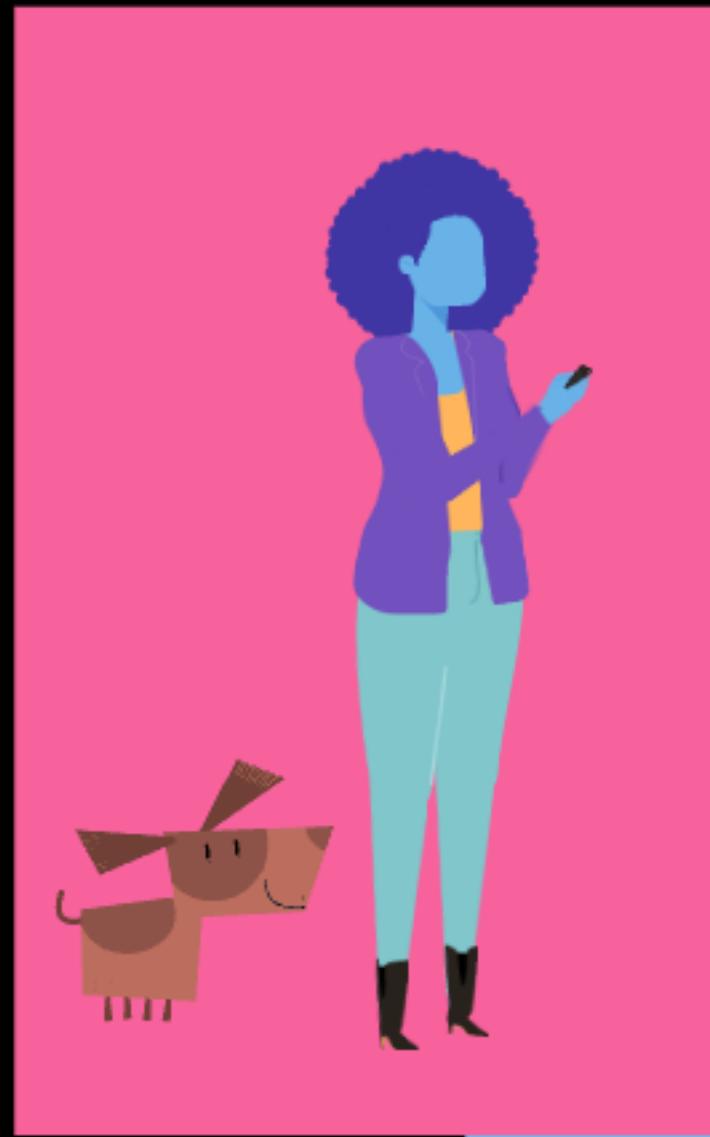
**The main topics we are going to
cover today**

2020



Covid-19
Global Pandemic
Lockdown





U5ErkJgg=="})base64,iVBORw0KG
0C1V9QD4NEOxs9xBQHQVCwSJF
hwVYBIdLn9vkLp79QcBCTDMiy3w2
QtffMBSO **TRADING** Uz4BDMle
MledhqOu/AzVSmzIUJKUz4BDMled
/AzVSmzZ49CUjCC0yvim98iqtJT2L2
IQx8Q7hQYFek4AkixXFe1rsFR4I/RT





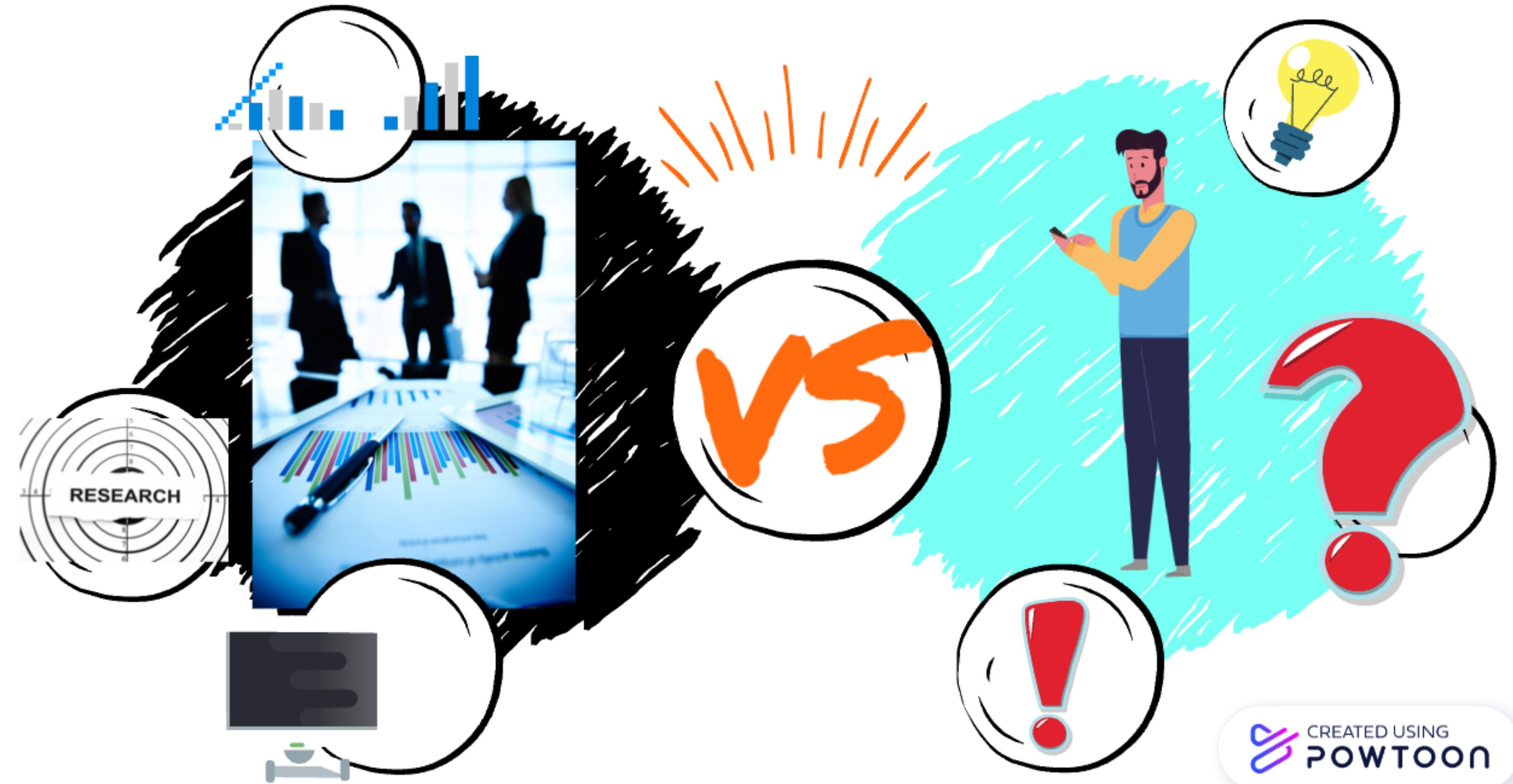
*Everyone's a Day
Trader Now*
-- WSJ

*The
#GameStop
Saga
Continues*
-- Forbes

*"Robinhood's
Addictive App
Made
Trading a Pandemic
Pastime"*
-- Bloomberg

*The Reddit Traders
took on
Wall Street Elite*
-- Financial Times

*The Stock Traders of
Reddit and TikTok*
-- The New York
Times





Two ~~Gaps~~

Opportunities

Identified...



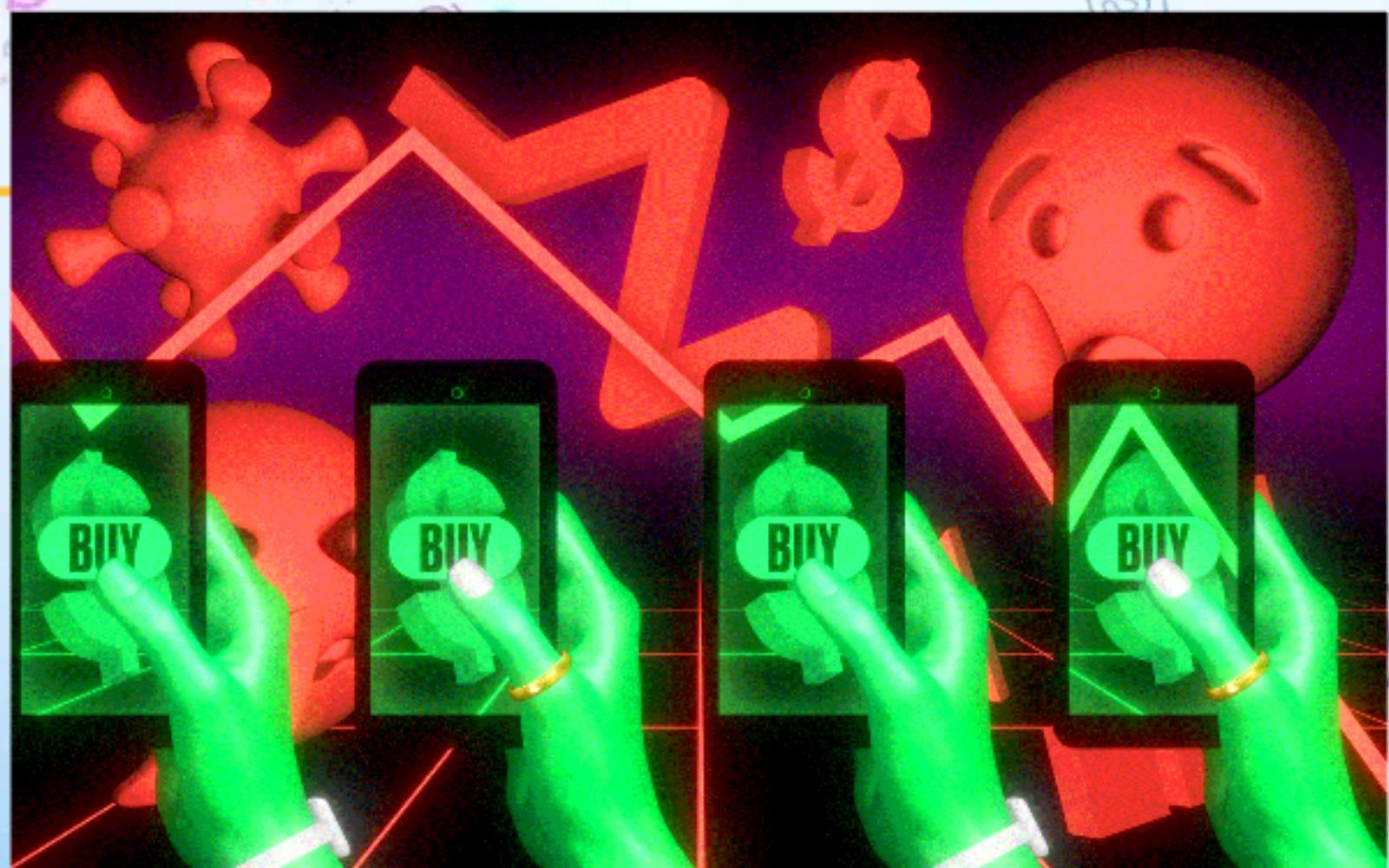
UNDERSERVED RETAIL INVESTORS

Institutional Investors

Social Media Sentiment

Now let's formally define the problem...

Problem Formulation



Project ➔ Objectives

1

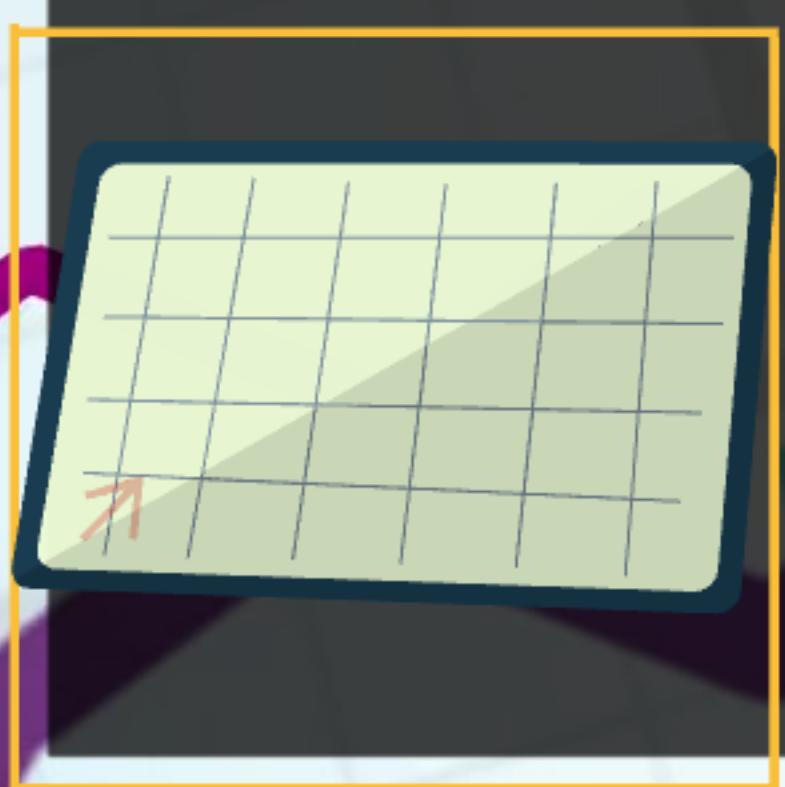
Create a prototype pipeline that...



... programmatically collects Twitter feed data on specific companies and automatically extracts sentiments from them.

2

Apply sentiment to predict price



The model would detect shifts in sentiment trends and predict share price movements accordingly

V e], U (" y {} m S 9' b| - ^ 0 MC B 2 s " > 9 6 w % H |
9 Z b I S A , a q] Z - f q16 B #) i @ 5 g M _ 3 I g |
j { * ; j A (, K + o } : l S1? u f Q Q 0 P W _ P z u |
0 ~ j { ' - W M > L k W 2 a ! r | 3 2 J p m I o) 0 { ^ W |
0 m + ! d @ 3 } c b) p n e l, m y * [0 ! X 9 Y p 1 |
?) w c * > ^ 1 I 1 , i | F o F , N ? P] : Z , _ j I T R |
> q } Z n X < i > + ? m 4 " | i e K R = A D T } 6 _ k 6 J |
u # b S - [T W R A e q u = f g E S { ^ > L ; 0 | 6 |
R ! b , C " \ k t ' z 0 z l J w q / |
" U C T M N # G f R u 6 7 3 \ ? \$ 6 |
0 ; ! I o p . f 7 g } / % r _ % @ 5 K h U P |
[I H I S P & 5 P ! X z A m - 6 W] : > d @ ^ r c 6 y d : T I |
i ; m N J . 2 J h ' [

```
64 bytes from 173.194.115.2: icmp_seq=220 ttl=57 t  
me=11.971 ms  
64 bytes from 173.194.115.2: icmp_seq=221 ttl=57 t  
me=9.943 ms  
64 bytes from 173.194.115.2: icmp_seq=222 ttl=57 t  
me=9.904 ms  
64 bytes from 173.194.115.2: icmp_seq=223 ttl=57 t  
me=11.735 ms  
64 bytes from 173.194.115.2: icmp_seq=224 ttl=57 t  
me=9.866 ms  
64 bytes from 173.194.115.2: icmp_seq=225 ttl=57 t  
me=11.284 ms
```

Explore NLP and ML tools

. and assess their applicability as a feasible, practical solution to a real world problem.



asible,
o a real



Model Overview

Data Collection

Preprocessing

Sentiment Analysis

Demo

Demo

Conclusion

