

```
# Import Libraries
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import string
import spacy

from matplotlib.pyplot import imread
from wordcloud import WordCloud, STOPWORDS
import nltk

elon_musk_data=pd.read_csv("Elon_musk.csv",encoding='ISO-8859-1')
elon_musk_data
```

Unnamed: 0		Text
0	1	@kunalb11 I m an alien
1	2	@ID_AA_Carmack Ray tracing on Cyberpunk with H...
2	3	@joerogan @Spotify Great interview!
3	4	@gtera27 Doge is underestimated
4	5	@teslacn Congratulations Tesla China for amazi...
...	...	...
1994	1995	@flcnhvy True, it sounds so surreal, but the n...
1995	1996	@PPathole Make sure to read ur terms & con...
1996	1997	@TeslaGong @PPathole Samwise Gamgee
1997	1998	@PPathole Altho Dumb and Dumber is <U+0001F525...
1998	1999	Progress update August 28

1999 rows × 2 columns

```
del elon_musk_data['Unnamed: 0']

elon_musk_data
```

## Text

	Text
0	@kunalb11 I'm an alien
1	@ID_AA_Carmack Ray tracing on Cyberpunk with HDR is next-level. Have you tried it?
2	@joerogan @Spotify Great interview!
3	@gtera27 Doge is underestimated
4	@teslacr Congratulations Tesla China for amazing execution last year. Now on to the next for even more!!

```
elon_musk_data=[Text.strip() for Text in elon_musk_data.Text] # remove both the leading and trailing spaces
elon_musk_data=[Text for Text in elon_musk_data if Text] # removes empty strings, because of the strip()
elon_musk_data[0:10]
```

```
['@kunalb11 I\'m an alien',
 '@ID_AA_Carmack Ray tracing on Cyberpunk with HDR is next-level. Have you tried it?',
 '@joerogan @Spotify Great interview!',
 '@gtera27 Doge is underestimated',
 '@teslacr Congratulations Tesla China for amazing execution last year. Now on to the next for even more!!',
 'Happy New Year of the Ox! https://t.co/9WFKMYu2oj',
 'Frodo was the underdog, All thought he would fail, Himself most of all. https://t.co/zGxJFDzzrM',
 '@OwenSparks_ @flcnhvy @anonyx10 Haha thanks :)',
 '@flcnhvy @anonyx10 Indeed! Tweets definitely do not represent real-world time allocation. The most entertaining outcome is the most likely']
```

```
nlTK.download("punkt")
```

```
[nlTK_data] Downloading package punkt to /root/nltk_data...
[nltk_data] Unzipping tokenizers/punkt.zip.
True
```

```
# Joining the list into one string/text
elon_musk_text=' '.join(elon_musk_data)
elon_musk_text
```

```
'@kunalb11 I\'m an alien @ID_AA_Carmack Ray tracing on Cyberpunk with HDR is next-level. Have you tried it? @joerogan @Spotify Great interview! @gtera27 Doge is underestimated @teslacr Congratulations Tesla China for amazing execution last year. Now on to the next for even more!! Happy New Year of the Ox! https://t.co/9WFKMYu2oj Frodo was the underdog, All thought he would fail, Himself most of all. https://t.co/zGxJFDzzrM @OwenSparks_ @flcnhvy @anonyx10 Haha thanks :) @flcnhvy @anonyx10 Indeed! Tweets definitely do not represent real-world time allocation. The most entertaining outcome is the most likely @GiveDirectly Just sent some Just agree to do C
```

```
# remove Twitter username handles from a given twitter text. (Removes @usernames)
from nltk.tokenize import TweetTokenizer
tkn = TweetTokenizer(strip_handles=True)
tweet_tokens=tkn.tokenize(elon_musk_text)
print(tweet_tokens)
```

```
['I', '\x92', 'm', 'an', 'alien', 'Ray', 'tracing', 'on', 'Cyberpunk', 'with', 'HDR', 'is', 'next', 'level', 'Have', 'you', 'tried', 'it?', '@joerogan', '@Spotify', 'Great', 'interview!', '@gtera27', 'Doge', 'is', 'und', 'erestimated', '@teslacr', 'Congratulations', 'Tesla', 'China', 'for', 'amazing', 'execution', 'last', 'year', '.', 'Now', 'on', 'to', 'the', 'next', 'for', 'even', 'more', '!!', 'Happy', 'New', 'Year', 'of', 'the', 'Ox!', 'https://t.co/9WFKMYu2oj', 'Frodo', 'was', 'the', 'underdog,', 'All', 'thought', 'he', 'would', 'fail,', 'Himself', 'most', 'of', 'all.', 'https://t.co/zGxJFDzzrM', '@OwenSparks_', '@flcnhvy', '@anonyx10', 'Haha', 'thanks', ':)', '@flcnhvy', '@anonyx10', 'I', 'ndeed!', 'Tweets', 'definitely', 'do', 'not', 'represent', 'real-world', 'time', 'allocation.', 'The', 'most', 'ente', 'rtaining', 'outcome', 'is', 'the', 'most', 'likely', '@GiveDirectly', 'Just', 'sent', 'some', 'Just', 'agree', 'to', 'do', 'C']
```

```
# Again joining the list into one string/text
```

```
tweets_tokens_text=' '.join(tweet_tokens)
```

```
tweets_tokens_text
```

```
'I \x92 m an alien Ray tracing on Cyberpunk with HDR is next-level . Have you tried it ? Great interview ! Doge is underestimated Congratulations Tesla China for amazing execution last year . Now on to the next for even more ! ! Happy New Year of the Ox ! https://t.co/9WFKMYu2oj Frodo was the underdog , All thought he would fail , Himself most of all . https://t.co/zGxJFDzzrM Haha thanks :) Indeed ! Tweets definitely do not represent real-world time allocation . The most entertaining outcome is the most likely Just sent some Just agree to do Clubhouse with https://t.co/3rWE9uHSTS It \x92 s getting real Bought some Dogecoin for lil X so he can be a toddler
```

```
# Remove Punctuations
```

```
no_punc_text=tweets_tokens_text.translate(str.maketrans('','',string.punctuation))
```

```
no_punc_text
```

```
'I \x92 m an alien Ray tracing on Cyberpunk with HDR is nextlevel Have you tried it Great interview Doge is underestimated Congratulations Tesla China for amazing execution last year Now on to the next for even more Happy New Year of the Ox h ttpstco9WFKMYu2oj Frodo was the underdog All thought he would fail Himself most of all httpstcozGxJFDzzrM Haha thanks Indeed Tweets definitely do not represent realworld time allocation The most entertaining outcome is the most likely Just sent some Just agree to do Clubhouse with httpstco3rWE9uHSTS It \x92 s getting real Bought some Dogecoin for lil X so he can be a toddler hodler He definitely has issues
```

```
# remove https or url within text
```

```
import re
```

```
no_url_text=re.sub(r'http\S+', '', no_punc_text)
```

```
no_url_text
```

```
'I \x92 m an alien Ray tracing on Cyberpunk with HDR is nextlevel Have you tried it Great interview Doge is underestimated Congratulations Tesla China for amazing execution last year Now on to the next for even more Happy New Year of the Ox Frodo was the underdog All thought he would fail Himself most of all Haha thanks Indeed Tweets definitely do not represent realworld time allocation The most entertaining outcome is the most likely Just sent some Just agree to do Clubhouse with It \x92 s getting real Bought some Dogecoin for lil X so he can be a toddler hodler He definitely has issues but the sentencing seems a bit high Thanks for fix
```

```
nlTK.download('punkt')
```

```
[nlTK_data] Downloading package punkt to /root/nltk_data...
```

```
[nlTK_data] Package punkt is already up-to-date!
```

```
True
```

```
nlTK.download('stopwords')
```

```
[nlTK_data] Downloading package stopwords to /root/nltk_data...
```

```
[nlTK_data] Unzipping corpora/stopwords.zip.
```

```
True
```

```
from nlTK.tokenize import word_tokenize
```

```
text_tokens=word_tokenize(no_url_text)
```

```
print(text_tokens)
```

```
['I', '\x92', 'm', 'an', 'alien', 'Ray', 'tracing', 'on', 'Cyberpunk', 'with', 'HDR'
```

```
# Tokens count
len(text_tokens)
```

```
17847
```

```
# Remove Stopwords
from nltk.corpus import stopwords
my_stop_words=stopwords.words('english')
```

```
sw_list = ['\x92', 'rt', 'ye', 'yeah', 'haha', 'Yes', 'U0001F923', 'I']
my_stop_words.extend(sw_list)
```

```
no_stop_tokens=[word for word in text_tokens if not word in my_stop_words]
print(no_stop_tokens)
```

```
['alien', 'Ray', 'tracing', 'Cyberpunk', 'HDR', 'nextlevel', 'Have', 'tried', 'Great
```

```
# Normalize the data
lower_words=[Text.lower() for Text in no_stop_tokens]
print(lower_words[100:200])
```

```
['once', 'predict', 'cash', 'flow', 'reasonably', 'well', 'starlink', 'ipo', 'starli
```

```
# Stemming (Optional)
from nltk.stem import PorterStemmer
ps=PorterStemmer()
stemmed_tokens=[ps.stem(word) for word in lower_words]
print(stemmed_tokens[100:200])
```

```
['onc', 'predict', 'cash', 'flow', 'reason', 'well', 'starlink', 'ipo', 'starlink',
```

```
# Lemmatization
nlp=spacy.load('en_core_web_sm')
doc=nlp(' '.join(lower_words))
print(doc)
```

```
alien ray tracing cyberpunk hdr nextlevel have tried great interview doge underestim
```

```
lemmas=[token.lemma_ for token in doc]
print(lemmas)
```

```
['alien', 'ray', 'trace', 'cyberpunk', 'hdr', 'nextlevel', 'have', 'try', 'great', ' '
```

```
clean_tweets=' '.join(lemmas)
```

```
clean_tweets
```

```
'alien ray trace cyberpunk hdr nextlevel have try great interview doge underestimat
ed congratulation tesla china amazing execution last year now next even happy new y
ear ox frodo underdoge all think would fail -PRON- haha thank indeed tweet definite
ly represent realworld time allocation the entertaining outcome likely just send ju
st agree clubhouse -PRON- get real buy dogecoin lil x toddler hodler -PRON- definit
ely issue sentencing seem bit high thank fix please unlock account this true power
any crypto wallet give private key avoid cost -PRON- app suck rt nasa select falcon
heavv launch first two element lunar gateway together one mission once predict cash
```

```
from sklearn.feature_extraction.text import CountVectorizer
cv=CountVectorizer()
tweetscv=cv.fit_transform(lemmas)
```

```
print(cv.vocabulary_)
```

```
{'alien': 195, 'ray': 2354, 'trace': 3019, 'cyberpunk': 767, 'hdr': 1363, 'nextlevel
```



```
print(cv.get_feature_names()[100:200])
```

```
['74', '78', '7th', '90', '9007', '922', '948', '95', '99', 'aber', 'able', 'abo', '
```



```
print(tweetscv.toarray()[100:200])
```

```
[[0 0 0 ... 0 0 0]
 [0 0 0 ... 0 0 0]
 [0 0 0 ... 0 0 0]
 ...
 [0 0 0 ... 0 0 0]
 [0 0 0 ... 0 0 0]
 [0 0 0 ... 0 0 0]]
```

```
print(tweetscv.toarray().shape)
```

```
(11486, 3416)
```

```
### CountVectorizer with N-grams(Bigrams & Trigrams)
```

```
cv_ngram_range=CountVectorizer(analyzer='word',ngram_range=(1,3),max_features=100)
bow_matrix_ngram=cv_ngram_range.fit_transform(lemmas)
```

```
print(cv_ngram_range.get_feature_names())
print(bow_matrix_ngram.toarray())
```

```
['actually', 'ai', 'also', 'back', 'big', 'booster', 'car', 'come', 'complete', 'coo
[[0 0 0 ... 0 0 0]
 [0 0 0 ... 0 0 0]
 [0 0 0 ... 0 0 0]
```

```
...
[0 0 0 ... 0 0 0]
[0 0 0 ... 0 0 0]
[0 0 0 ... 0 0 0]]
```

### ### TF-IDF Vectorizer

```
from sklearn.feature_extraction.text import TfidfVectorizer
tfidf_v_ngram_max_features=TfidfVectorizer(norm='l2',analyzer='word',ngram_range=(1,3),max_
tfidf_matix_ngram=tfidf_v_ngram_max_features.fit_transform(lemmas)
```

```
print(tfidf_v_ngram_max_features.get_feature_names())
print(tfidf_matix_ngram.toarray())
```

```
['10', '100', '13', '20', '2020', '30', '300', '40', '4d', '60', 'able', 'absolutely']
[[0. 0. 0. ... 0. 0. 0.]
 [0. 0. 0. ... 0. 0. 0.]
 [0. 0. 0. ... 0. 0. 0.]
 ...
 [0. 0. 0. ... 0. 0. 0.]
 [0. 0. 0. ... 0. 0. 0.]
 [0. 0. 0. ... 0. 0. 0.]]
```

### ## Generate WordCloud

```
# Define a function to plot word cloud
```

```
def plot_cloud(wordcloud):
    plt.figure(figsize=(40,30))
    plt.imshow(wordcloud)
    plt.axis('off')
```

```
# Generate Word Cloud
```

```
STOPWORDS.add('pron')
STOPWORDS.add('rt')
STOPWORDS.add('yeah')
wordcloud=WordCloud(width=3000,height=2000,background_color='black',max_words=50,
                    colormap='Set1',stopwords=STOPWORDS).generate(clean_tweets)
plot_cloud(wordcloud)
```



```
## Named Entity Recognition NER
```

```
# Parts Of Speech (POS) Tagging  
nlp=spacy.load('en_core_web_sm')
```

```
one_block=clean_tweets  
doc_block=nlp(one_block)  
spacy.displacy.render(doc_block, style='ent', jupyter=True)
```

alien ray trace **PERSON** cyberpunk hdr nextlevel **LOC** have try great interview doge underestimated congratulation tesla china amazing execution last year **DATE** now next even happy new year **EVENT** ox frodo underdoge all think would fail -PRON- haha thank indeed tweet definitely represent realworld time allocation the entertaining outcome likely just send just agree clubhouse - PRON- get real buy dogecoin lil x toddler hodler -PRON- definitely issue sentencing seem bit high thank fix please unlock account this true power any crypto wallet give private key avoid cost -PRON- app suck rt nasa **ORG** select falcon heavy launch first **ORDINAL** two **CARDINAL** element lunar gateway together one **CARDINAL** mission once predict cash flow reasonably well starlink ipo starlink staggeringly difficult technical economic endeavor however spacex need pass deep chasm negative cash flow next year **DATE** low cost per ton carbon sequester net value product make must scalable g -PRON- mean price country only difference taxis ship this intend earth **LOC** may idea apply mars xprize **LOC** team manage 100 **CARDINAL** m carbon capture prize everyone tesla receive stock -PRON- comp stock option take table that miss back work go do seem bit high doge appear inflationary meaningfully fix coin per unit time whereas wow 1 **CARDINAL** orbital launch tower stack 2 **CARDINAL** enough raptor orbit booster 3 **CARDINAL** improve ship booster mass back work tonight **TIME** ð ðogecoin instructional video the people speak so cute u0001f495 **ORG** extremely misleading image reflect true time cost people rain pain u0001f3b6 who let doge u0001f3b6 hodl rainforest so finally come -PRON- fun crypto -PRON- simplicity genius yup true not easy this two decade **DATE** intense work have look old note email text lesson learn of earth mars **LOC** time tell story tesla spacex have read -PRON- great the second **ORDINAL** last kingdom haven hear name year **DATE** dogecake yolt that damian **NORP** yeah sure the great thing restaurant get hang stranger sjm the future currency earth just scratch much wow u0001f5a4 **ORG** destiny franz essential that say ship landing burn clear solution -PRON- greate will still use hot gas maneuvering rcs **ORG** thruster high isp intuitively would seem turbopumpfe raptor mu rt falcon 9 **CARDINAL** launch spherex mission collect data 300 million **CARDINAL** galaxy explore un **ORG** rt falcon 9 **CARDINAL** launch 60 **CARDINAL** starlink satellite orbit mission pad 39a **CARDINAL** deck - PRON- true yeah by default engine least lever arm would shut 3 **CARDINAL** good engine min throttle point flameout risk la -PRON- foolish -PRON- start 3 **CARDINAL** engine immediately shut 1 2 **CARDINAL** need land become meme destroyer short may actually happen sandstorm masterpiece - PRON- dumb next time try pull method lowkey loki no high low doge no need gigachad dogecoin people



crypto ur welcome the entertaining outcome likely doge high sea wind this tough one rt watch falcon 9

**CARDINAL** launch 60 **CARDINAL** starlink satellite u2192 off twitter -PRON- fill graffiti art u043c  
u044b u0441 u0434 u0435 u043b u0430 u0435 u043c giga berlin **GPE** progress neuralink work  
super hard ensure implant safety close communication rt this mission enable access everyday people  
dream go space rt announce first commercial astronaut mission orbit earth **LOC** aboard dragon  
u2192 if work advanced wearable phone robot skill need feel weird help make hopefully good version  
cyberpunk come true please consider work neuralink shortterm solve brain spine injuries longterm  
human ai symbiosis latte **PERSON** on clubhouse tonight **TIME** 10 p.m. **TIME** la time tom great  
stories experim rt launch alert u0001f680 **ORG** target early april **DATE** 20 launch second  
**ORDINAL** crew rotation mis -PRON- become big fan methane that sound correct tom **PERSON**  
certainly deserve lot cre tom great instrumental develop early ver t w 15 **CARDINAL** accelerate  
unusually fast high t w important reusable v no escaping read whole article warm sunny day snowy  
mountain what beautiful day la yeah dr frankenstein **PERSON** never use guy -PRON- give talk  
spacex only halo sure hope true tesla spacex cryoproof install engine starship sn9 sn10 **PERSON** in  
retrospect inevitable great shot live sword die sword entropy buy hold company make good produce  
service love earth **LOC** small small still u0001f440 **GPE** with cyberpunk even hotfixe literally  
hotfixe great game the dollar shorting indeed shopify great spacex use indeed the economy **NORP**  
make useful product provide great service **ORG** actually matter tanstaafl would better small fee  
fee latter make robin here come shorty apologist give respect get shorty u sell house u u **ORG** sell  
car u u **ORG** sell stock u bs **PRODUCT** sh finish engineering year production start next year  
**DATE** aiming release candidate desig make video absolutely unlike aircraft division fine faa space  
**ORG** division fundamentally break reg nomad **PERSON** u0001f917 the esthetic cyberpunk  
incredible btw the interior design u0001f44c major esthetic improvement come a little new roadster part  
rocket there storage easily upgradable yeah probably month **DATE** after drive without use prnd stalk  
stick day get annoying go back use shifter no stalk car guess drive direction base obstacle see context  
nav map -PRON- a hedge fund short shrubbery yeah also rear screen 0 155 mph **QUANTITY** trap  
speed 14 mile **QUANTITY** 200 mph **QUANTITY** top speed right tire first **ORDINAL** production  
car ever achieve 0 60 mph **QUANTITY** less 2 second -PRON- play cyberpunk plaid model s ship  
next month **DATE** even discord go corpo yup wild time discord wait faa **ORG** review gamestonk

nass initial pressure test buv hand knit wool marvin martian helm dog **PERSON** kinda **GPE** love

pass initial procedure test say thank him too! marvin - marvin from dog - PERSON - kind - GPE - 1070

etsy PERSON -PRON- serve public hamstring starlink today DATE amazon satellite ORG  
 system -PRON- hope faa ORG approval test flight tomorrow afternoon TIME the entire stack  
 datum collection labeling inference surround video th although crazy turn fsd tesla steadily move nns  
 8 CARDINAL camera surround video this enable superhuman selfdrive some tyranny also road hell  
 mostly pave bad intention catchy all sat launch next year DATE laser link only yup hope these also  
 laser link satellite ground station need pole sorry version confusion v8 1 say fsd separate version  
 number rest car to surprise tesla DATE well ai hardware software waymo money -PRON- float  
 falloutthemed opening party ORG vegas loop happen soon allow under vegas GPE tunnel  
 yesterday DATE boy laser rt spacex rideshare offering provide increase access space small satellite  
 operator seek reliable affordable rid rt falcon 9 CARDINAL first stage land of course still love -PRON-  
 droneship rt liftoff u0001f4af -PRON- switch sensible fsd version number distinguish major minor update  
 hopefully early next week DATE rt due unfavorable weather stand today DATE launch team  
 continue countdown t 30 CARDINAL seco give many company depend mission get even scru launch  
 many small satellite wide range customer tomorrow DATE excite offer lowcost access -PRON- part  
 solution require lot fresh water land -PRON- may need something sn9 -PRON- good path fully  
 renewable rocket energy solve part problem long chain hyd detail next week DATE be donate 100  
 CARDINAL m towards prize good carbon capture technology pretty much that would probably mean  
 civilization gr absolutely -PRON- rock u0001f5a4 ORG rt falcon 9 CARDINAL launch starlink  
 orbit eighth CARDINAL launch landing booster the ratelimit part process cell production  
 constantly change car truck stick traffic generate megaton ORG toxic gas particulate with giant cast  
 machine literally try make fullsize car tegmark exceptionally smart good human the good manufacturing  
 technology ultra high volume industry like food beverage medical eg syringes toy battery cell production  
 fundamental ratelimiter slow sustainable energy future very important pr look no question fsd view  
 reasonably valuable tradein for sure glad ok congratulation this good one whistle cybertruck need  
 garage -PRON- awesome good point -PRON- serverside code much happy birthday wikipedia so glad  
 exist guess watch cobra kai fallout new texas GPE only chuck norris divide zero CARDINAL  
 good point the thing call money information system labor allocation what actuall monty python amazing -  
 PRON- sure twist knife show probably wise -PRON- make major improvement ease engine swap need  
 hour TIME two CARDINAL engine need slight repair switch nice shot -PRON- high school

internship please apply college prototype copy volume production hard positive cash flow overvalued

internship please apply college prototype easy volume production hard positive cash flow extruciate

physics rt splashdown dragon confirm complete spacex 21st **ORDINAL** resupply mission first

**ORDINAL** return cargo resupp detanke inspection good progress towards hop go mars goal all

three **CARDINAL** static fire complete rud wow lot happen 10 year **DATE** fair enough sea shanty

tiktok take new level actual pirate ship sure today **DATE** spacex practice starship engine start ship

hold massive pin engine fir as promise legalize comedy -PRON- steal name logo probably sue -PRON-

try get people mars **LOC** help would appreciate one day **DATE** get camera also show star field

background rt separation confirm dragon perform 3 **CARDINAL** departure burn move away suicide

double homicide absolutely hey yeah queen -PRON- gon na make u0001f495 u0001f495 **ORG** hate

say may true the robot future come 300 km **QUANTITY** every millisecond time wish faster mus

**ORG** protec u0001f476 yoda **PERSON** u041e u043d u0431 **ORG** u044b u043b u0432 u0435

u043b u0438 u043a u043e u043b u0435 u043f u0435 u043d this important distinction much increase

rapidly -PRON- once something happen even better imagine the factory product probably comment buy

replacement glass junkyard 20 -PRON- great place get spare part a lot people go super unhappy west

coast **LOC** high tech de facto arbiter free speech already donate signal year ago **DATE** will

donate primarily try advance two **CARDINAL** cause sustainable energy extend life consciousness

beyond e maybe tesla ai day later year **DATE** the prancing pony u0001f622 -PRON- true long yeah

seem optimistic -PRON- 14 yearold **QUANTITY** son saxon say feel like 2021 good year **DATE**

agree let -PRON- make be also think spacex boca **PERSON** hold fun party give tour community time

time super support public space around production launch site wherever do that catapult high air land

roof base jump parachute way travel that actually restaurant spacex build futuristic bar top h and

increase fun hopefully -PRON- neither one good tesla solar roof installation no maybe one day **DATE**

would best way a large solar field reactor need po -PRON- sick beat probably less dozen **CARDINAL**

primary decisionmaker technically three or least **CARDINAL** option verification public ascribe

credibilit launch underway btw critical feedback always super appreciate well way donate money really

make difference way harder seem yup indirectly electric rocket possible use electricity convert co2 h2o

ch4 o2 this not get orbit unfortunately in space photon emission power matterantimatter annihila this

hard make like vehicle play long game true hope wing work moon def well mars **LOC** also runway

hamiltonians 2v **CARDINAL** potential langrangians **NORP** play well back work how strange use

signal ya say remind timeless classic fast water tiny rock occam razor actually third **ORDINAL** likely

as see external observer participant the entertaining outcome likely dumb dumb great movie tho this call  
 domino effect because large footprint may seem flat actually range 5 **CARDINAL** story tall snow fall  
 giga berlin **PERSON** u0001f609 tesla responsible 23 **CARDINAL** personal professional pain life  
 combine but worth so proud tesla team **ORG** achieve major milestone at start tesla **PRODUCT**  
 think optimistica **PERSON** rt in 2020 **DATE** produce deliver half million **CARDINAL** car huge  
 thank make possible um giant fusion reactor sky work maintenance tesla **CARDINAL** full selfdrive  
 work safety level well average driver year **DATE** dojo need make selfdrive better -PRON- enough  
 safe human driver aut ignore **PERSON** head great interview mathia **ORG** döpfner u0001f3a9 the  
 great gatsby u0001f3a9 **ORG** inspire ballet rocket motion primarily vertical want top open let make  
 roar 20 **CARDINAL** might lump along way production hard prototype easy building 1000 starship  
 create exactly haha sn9 press ch4 header tank helium longterm solution debate leg would certainly  
 work good part part good step step save mass cost leg enable immediate reposition booster launch  
 mount rea -PRON- go try catch super heavy booster launch tower arm use grid fin take load  
 snakehead dog undivided attention winderhead ostrich come glide nonchalant seem odd opposition  
 group bmw **PRODUCT** home state baveria **GPE** that far brande **GPE** this sensible  
 opposition anywhere mean progress everywhere literally be sure real destiny destiny no escape all tesla  
 car deliver final three day year **DATE** get three month **DATE** full selfdriving option and mark  
 dankberg **PERSON** this action wack dank **PERSON** less westworld the last kingdom show great  
 absolutely will text visualization could add voice even cheese make cake if love -PRON- deep trouble  
 not everything make cake true such weird game think this cgi -PRON- need ui overhaul no incremental  
 improvement production codebase fsd build starlink pose hazard **ORG** viasat **PERSON**  
 profit like stop sneaky move charlie ergen entertainment **PERSON** critical car drive just meeting  
 larry ellison **PERSON** seek advice back work tesla end quarter **DATE** tomorrow **DATE**  
 absolutely what tesla **CARDINAL** incar game autonomous world absolutely taste future try play  
 polytopia tesla great game multiplayer online version come soon focus make product service people  
 truly love total economic pie big instead en roughly 95 **CARDINAL** part tesla roadster unique pro  
 very important ok service may able will check -PRON- mean install external speaker early car no  
 definitely year good point interesting liz **PERSON** always do great interview falcon 25 **CARDINAL**  
 successful orbital launch 2020 **CARDINAL** maybe majority pa vaccines start -PRON- also capable  
 theory cure almost anything turn medicine -PRON- offer multiple display option a revision need probably

beta 10 11 **CARDINAL** sure haha **PERSON** ok there subtle important difference us canada  
**GPE** traffic rule bu -PRON- need match traffic speed set definitely -PRON- step direction -PRON-  
 one **CARDINAL** u0001f525 12 u0001f525 car pedestrian speaker -PRON- get everything do the writin  
 cobra kai sick **PERSON** u0001f44c haha **PERSON** save nightmare see short -PRON- upload  
 custom music sound unfortunately pedestrian speaker need otherwise external sound generator except  
 actual horn change horn sound u0001f410 u0001f40d u0001f3b7 u0001f4a8 holiday jingle late tesla  
 software update merry christmas **PERSON** happy holiday u0001f381 great game -PRON- likely  
 make sense starlink go public revenue growth reasonably predictable engineering design general  
 company operation absorb vast majority mind fundamental li **PERSON** a month come soon minor  
 yeah 12 **CARDINAL** story rocket turn engine control fall yup iron bug to tesla owner take delivery  
 final day year **DATE** support super appreciate frictionless ai **ORG** what could possibly go wrong  
 good idea during dark day **DATE** model 3 **CARDINAL** program reach tim cook **PERSON**  
 discuss possibility strange true tesla already use ironphosphate medium range car make shanghai  
 facto sparta **ORG** reply macedon **PERSON** hi liz **PERSON** thank everyone work hard make  
 tesla successful -PRON- heart go indeed -PRON- seriously twist affair end well -PRON- although kind  
 lowkey tesla supercharger make accessible electric car rt photo yesterday **DATE** launch landing  
 u2192 be large transaction even possible u2665 ufe0f **ORG** love u crazy ppl u2665 ufe0f **ORG** -  
 PRON- point sigh great game pretty much the main value college use hang pseudo intellectual  
 conversation come comment stay meme u0001f484 absolutely -PRON- release fsd subscription early  
 next year one **DATE** word doge bitcoin almost bs fiat money great nails lipstick sound right lord  
 edge nice branding just kid need safe word anyway bitcoin **GPE** safe word rt falcon 9 **CARDINAL**  
 first stage land land zone 1 **CARDINAL** rt liftoff standing today **DATE** inspect rocket hopefully  
 launch tomorrow **DATE** pressure slightly high upper stage liquid oxygen tank review underway hope  
 back next month **DATE** very impressive mission china **GPE** last launch 2020 come -PRON-  
 indeed quite grumpy actually know point -PRON- get absurdly good tesla ai autopilot engineering  
 awesome there great ai ther star light star bright this incorrect but visually stunning playability good a  
 tshirt well armor kevlar chest plate make sense absence magic also w oh umm absolutely support  
 trans **NORP** pronoun esthetic nightmare the raptor well max **PERSON** thrust ship would blown alt  
 far fully load go slow ship would gone crazy high far three **CARDINAL** engine -PRON- good great  
 game imo improve may seem like mere surface detail woul perhaps slightly confident essential view

output vs time as dankeschön brandenburg und grünheide sure hope future come pass giga  
 berlinbrandenburg first **ORDINAL** use new structural pack architecture 4680 **CARDINAL** world  
 original deus ex incredible human revolution also great the objective reality impossible run advanced  
 game well old hardware this rt starship landing flip maneuver ascent heaven yeah briefly seem pretty  
 good pick nomad start little slow pick hehe rt falcon 9 **CARDINAL** launch sxm 7 **CARDINAL** orbit  
 complete spacex 25th launch year **DATE** init void cool still soft spot heart transpiration cooking in  
 theory would -PRON- ship leeward side bare metal windward **ORG** black hexagonal heat shield tile  
 rt can not wait spacex spacexstarship agree preserve memory sn8 rt **PRODUCT** photos starship  
 sn8 **LANGUAGE** flight test u2192 exactly woohoo sn8 great even **FAC** reach apogee would great  
 control way put thank south texas **LOC** support this gateway mar life **PRODUCT** universe  
 everything yeah engine great mars **FAC** come fuel header tank pressure low landing burn cause  
 touchdown velocity high rud get successful ascent switchover header tank precise flap control landing  
 point u0001f920 nearorbital **ORG** space fast way travel long distance earth -PRON- call space  
 station actually move around earth 25 **CARDINAL** time spee rt timelapse dragon approach two  
**CARDINAL** dragon dock so long thank orifice alien message decrypt probably 13 **CARDINAL**  
 chance complete mission objective hopefully fly tomorrow **DATE** yup rt success at 140 pm **TIME**  
 et upgrade dragon cargo spacecraft autonomously dock u0001f409 **ORG** this 1st **DATE** out pad  
 south texas **GPE** rt the station dragon go orbital night period 130 pm et dock the crewdragon  
**GPE** wow station look amazing rt good morning earthling u2600 ufe0f **ORG** the journey continue  
 watch nasa **ORG** cargo resupply mission dock knock knock singe telegram carry even symbiotic  
 bacteria 40 trillion **MONEY** cell -PRON- mobile cell colony 100 **CARDINAL** rt track footage  
 helicopter today **DATE** falcon 9 **CARDINAL** launch lc 39a **CARDINAL** rt there something  
 genuinely magical see starship sn8 **CARDINAL** person boca chica beautiful quiet serine t -PRON- be  
 gespräch mit mathias döpfner rt dragon separation confirm spacecraft way autonomous docking  
 tomorrow **DATE** approximately 1 **CARDINAL** rt falcon 9 **ORG** booster land of course still love  
 PRON- droneship rt liftoff congratulations congratulation rt tunnel rave and toilet paper watch demolition  
 man prometheus unbound rt the falcon 9 **CARDINAL** booster support mission previously launch  
 astronaut bob behnken doug hurley **PERSON** not bad -PRON- beast compare vic 20 **CARDINAL**  
 award accept behalf great people tesla spacex neuralink boring co much people think science actually  
 engineer eg thing rocket scientist roc **EVENT** science discover essential truth exist universe

engineering create thing -PRON- get bit cold night paint make hell difference congrat thank everything  
 help build spacex some good memory ever -PRON- real soon starship leg one **CARDINAL** hard  
 problem external static fire risky build site need clear build site early flight just static fire tomorrow  
**DATE** flight earlier wednesday **TIME** -PRON- landing leg sad news tony great **PERSON** for  
 second **ORDINAL** thought pic thano yeah truncate zero **CARDINAL** round probably go wide beta  
 2 week **DATE** fp16 **PRODUCT** least important digit truncate feel like fp32 bet training dojo int 8  
**CARDINAL** almost heavy lift inference work great but actually happy thanksgiving hopefully next  
 month **DATE** ok overall air suspension height damp algorithm haha **PERSON** true the promise  
 greatly need -PRON- special color new roadster original savage if ever wonder come this life leader  
 launch risk normal slightly fill this subject much debate major upgrade slate sn15 **FAC** many small  
 improvement overall similar wiring robust engine mat but sn 9 **CARDINAL** sn10 lot thing need go  
 right maybe 13 **CARDINAL** chance good starship sn8 **CARDINAL** static fire aim first 15 km  
**QUANTITY** 50k ft altitude flight next week **DATE** goal test 3 **CARDINAL** engin maybe start  
 year **DATE** depend starship progress go not yet not bad -PRON- definitely need engine make cargo  
 bay propel rapid complete rocket reuse low cost propellant orbital refill propellant production -PRON-  
 still far simply video control the big gamechanger cu fsd beta 5 come day **DATE** improvement  
 significant exciting mission wow yea tomorrow **DATE** 7th flight rocket land droneship of course still  
 love -PRON- sure true -PRON- quiet queue product build well new roadster point u0001f62c fate love  
 irony hate hypocrisy rt booster separation secondengine start fair separation u s european **NORP**  
 sentinel 6 michael freilich oceanobserving u0001f603 -PRON- datum center name skynet joke 10 year  
 ago **DATE** may tempt fate tesla **ORDINAL** vehicle create produce many useful product large cast  
 titanium part world no heat shield need landing vandenberg afb california **PERSON** actually side take  
 launch where because investor tesla definitely good company invest n well almost anything quite day  
 ahead rt crew 1 **CARDINAL** view earth dragon flight now call pointy cool -PRON- move 25  
**CARDINAL** time speed sound feel like nothing there always upgrade -PRON- well human vision quite  
 margin reality look like strange ghostworld radar wavelength exactly this misperception spacex develop  
 continue use lidar dragon dock one day **DATE** fly starship well do comment turbopump internal  
 detail roughly ballpark wow roc **GPE** to clear xpeng problem other company china **ORG** do  
 andrej awesome say talented autopilot yeah -PRON- stole apple code -PRON- old version software nn  
 inference computer wild time congrat yup change part otherwise fine caution strongly advise spacs sure

haha sexy crop champion **PERSON** time if next week **DATE** release look good widen beta  
 unfortunately many rule around liquor distribution even -PRON- next week **DATE** release special lot  
 fundamental improvement important bug fix entire n 13 year **DATE** 11 billion **CARDINAL** wow  
 safety primary design goal fully let martian decide future a lot brain space spend deal unit terraforme  
 slow relevant lifetime however establish human base that certainly intention the publicly trade stock  
 tesla wise word bogle the point company product service -PRON- point them no mild cold same bro def  
 cov 2 though pc 20 **CARDINAL** mean viral life glass dome first eventually terraforme support life like  
 earth **LOC** yeah go say sim seem obvious devera and case high noninfectious ct quarantine  
 day **DATE** get another test seco so many thing want know want maybe little mercy tesla holiday  
 software release u0001f525 u0001f525 u0001f60f cobra kai deep cut -PRON- cake someone take bite  
 there thing much sentience deus ex machine learn -PRON- design make life multiplanetary otherwise  
 extreme overkill mere earth **LOC** sector activity more like give bless -PRON- sort groundswell  
 believe nullius verba indeed dojo doge yeah look like marginal cost launch less 1 m 1 exactly merlin  
**PERSON** strong local maximum design kerosene **PERSON** suboptimal fuel matter visit american  
**NORP** ah irony much yeah pcr ct unequivocal 20 **CARDINAL** doesn matter maybe make notable  
 change will wait figurative literal dust settle pretty close definitely feel u0001f4af take dayquil frankly  
 one **CARDINAL** avionics cable move steel pipe shield add watercooled steel pipe test pad about 2  
**CARDINAL** secs start engine martyte cover concrete shatter send blade the amazing thing rocket  
 engine sometimes blow the -PRON- count atom point absolutely production testing rocket engine 90  
**CARDINAL** -PRON- first **ORDINAL** merlin engine design really bad tbh nothing work well maybe  
 love irony -PRON- way hopefully teslaquila next month **DATE** special permission receive  
 stonecutter guild fate u0001f5a4 irony well say u0001f47b u0001f4b5 damn easy spend quite bit time  
 look russian **NORP** ukrainian **NORP** engine -PRON- good rt docking confirm crew dragon  
 arrive u0001f3b6 **ORG** toss bitcoin ur witcher u0001f3b6 u0001f609 rt u0001f409 enter crew dragon  
 at 448 **CARDINAL** p est 948 **CARDINAL** p utc nasa **ORG** crew 1 **CARDINAL** astronaut  
 give live tour space curevac moderna other tesla make machine curevac use go kn create synthetic  
 mrna cure vaccines future medicine imo turn mostly haha great thread ok thank ask no symptom past  
 day **DATE** apart fatigue unless something chang u2665 ufe0f **ORG** launch 5 minute **TIME**  
 yeah cool channel integrate chamber **ORG** wall the propellant use either abort orbital maneuver  
 one **CARDINAL** use obviate dragon also hover land propulsively use parachute maximum safety



thruster integrate spacecraft enable abort capability way abort increase safety rt what song would play  
ride launch pad launchamerica rt dragon complete 22 **CARDINAL** flight -PRON- design begin human  
spaceflight mi rt dragon spacecraft currently fly capable return significant amount cargo earth first priv rt  
spacex customtailore suit route communication cool system protect crew event cabin depressu rt live  
now -PRON- ready launchamerica be u0001f680 watch coverage nasa **ORG** crew 1 **CARDINAL**  
mission liftoff 727 pm **QUANTITY** et rt watch falcon 9 **CARDINAL** launch crew dragon first  
**ORDINAL** operational mission astronaut board u2192 ok rt all system go tonight **TIME** launch  
727 **CARDINAL** p est crew dragon first **ORDINAL** operational mission four **CARDINAL** astronau  
boa yeah feel pretty normal no symptom right last week **DATE** sym do test several different lab time  
day administer rn both obv **ORG** insanely great bad pointless argument astronaut launch today  
**DATE** rt u0001f338 message boys girls japan **GPE** space wait in spotlight astronaut so rt this  
week u0001f680 nasas crew 1 **CARDINAL** astronaut arrive ahead launch u0001f534 -PRON- rover  
mark 100 day **DATE** rt spacex nasa **ORG** crew1 finish final dress rehearsal get ready  
saturday **DATE** launch behind real dragon no kid though hell wig collection -PRON- would great lab  
could give people level granular feedback result rt great question -PRON- complex question depend test  
use ie want kn worth reading thread curious rona testing -PRON- imo if get blood pressure test tell  
number ju **PERSON** a little feel like regular cold body achy cloudy head co in opinion ct number cov  
2 n1 gene pcr test probably regard cool please super cautious expect two **CARDINAL** step forward  
one **CARDINAL** back lot new code merge just scratch -PRON- buff be get wildly different result  
different lab likely moderate case covid npcs way ahem unless dmt law thermodynamic 1 **CARDINAL**  
-PRON- win 2 **CARDINAL** -PRON- break even 3 **CARDINAL** -PRON- stop play shake fist entropy  
big expansion beta program 6 8 week **DATE** interesting -PRON- thursday **DATE** night **TIME**  
saliva sample come back today **DATE** n1 gene unique cov **PERSON** what honey feel way this  
seem accurate cold symptom go u0001f600 u0001f680 u0001f4ab there degree pos heneghan  
**PERSON** make lot sense hilarious clarify r the number pcr amplification cycle require detect virus  
rough indicator vir this great reference worth read case close soon fwiw lab speak think 30 **CARDINAL**  
accurate 30 40 **CARDINAL** get dicey 40 **CARDINAL** bs will talk lab speak say cov 2 **CARDINAL**  
pcr detection n1 n3 **CARDINAL** gene 30 **CARDINAL** cycle reliable 40 **CARDINAL** cycle note  
spike protein -PRON- consider reliable just speak directly test lab -PRON- main pcr search n1 gene  
unique strange possible explanation dramatic decline cold flu prevalence vs prior year **DATE** if

someone come moreover low true prevalence high false positive number this sound obvious from sure  
 would great hear people know lot pcr testing industry what approximate false posi interesting interesting  
 what general population knowledge symptom accuracy sarscov 2 **CARDINAL** pcr test possible gene  
 a good pcr test identify cov 2 **CARDINAL** spike protein although hear mild sniffle cough slight fever  
 past day **DATE** right symptom although take nyquil technically test positive negative twice positive  
 elon musk test negati the carousel turn ever faster yup exactly symptom typical cold nothing unusual far  
 if happen happen other get pcr test separate lab result take 24 hour **TIME** something extremely  
 bogus going be test covid four **CARDINAL** time today **DATE** two **CARDINAL** test come back  
 negative two **QUANTITY** cam burst disk work vehicle appear ok -PRON- swap least one engine  
 maybe melt engine preburner fuel hot gas manifold whatev -PRON- lose vehicle pneumatic reason  
 unknown present liquid oxygen header tank pressure risin u0001f44d rt tesla top list 2020 **CARDINAL**  
 most attractive employer -PRON- engineering student 4 **CARDINAL** astronaut fly sit night cape first  
**ORDINAL** operational flight crew dragon luck good superpower rt thank serve sacrifice veteransday rt  
 crew access arm swing place -PRON- honor would choose work strive ensure company enable such  
 privilege work people like respect much feel bless rt the flight readiness review crew 1 **CARDINAL**  
 mission conclude go rt falcon 9 **CARDINAL** crew dragon vertical launch complex 39a **CARDINAL**  
 probably happy see expect become important product world probably financially material tesla there  
 entry tesla make rna bioreactor make vaccine cure curevac version 2 **CARDINAL** use rt crew dragon  
 falcon 9 hangar **QUANTITY** launch complex 39a **CARDINAL** ahead launch four **CARDINAL**  
 astronaut liftoff check hope game twist tedium fear cancel rt rumor austin **PERSON** chalk  
 geologically one **CARDINAL** good soil tunnel want find austin job avai damn cookie browser set  
 thank lot great autopilot ai hardware software engineer tesla for sure will worth exactly sure actually still  
 wait see cybertruck this accidental will back shortly rt 20k **CARDINAL** supercharger count be hope  
 change booster design land back launch mount chip temp sensor automatically maintain safe temp  
 enough already plate tesla maybe one day **DATE** prototy neuralink overclock brain transfer  
 processing supercomputer extension yo -PRON- rewrote labeling software 4d **CARDINAL** very  
 different label single phot version 1 year **DATE** away -PRON- would appear calculation incorrect  
 china **GPE** understand profound importance reusability the era expendable rocket soon u2660 ufe  
**ORG** u2660 ufe0f **ORG** tesla autopilot ai team u2660 ufe0f **ORG** u2660 ufe0f **ORG** good

explanation 4d **CARDINAL** essential dynamically occlude object especially large intersection rt the

explanation to **CARDINAL** essential dynamically occlude object especially large intersection it the  
 phantom opera be inside mind u0001f1e8 u0001f1e6 u0001f600 just look problemsolver get thing do  
 high sense urgency don care go school when send resume please describe hard problem solve exactly  
 solve a new banner need neither hard leave right another fine day simulation faraday **DATE** invent  
 electric motor tesla commutatorfree threephase ac induction motor maxwell amazing should  
 recognition tesla motors inc **ORG** almost call faraday 420 ten **CARDINAL** time well 42 u0001f91  
**MONEY** rt deployment gps iii 4 **CARDINAL** confirm rt falcon 9 **CARDINAL** first stage land of  
 course still love -PRON- droneship rt liftoff await approval canadian authority **ORG** recruit ace  
 engineers giga berlin **GPE** will interview person tomorrow **DATE** site send resume  
 25gunsteslacom stop chad **GPE** uh chad **GPE** wtf einstein great succeed engineering try yeah  
 relatively easy user ocean although expect stock rise much super appreciate support steve **PERSON**  
 that convertible loan give -PRON- 6 month **DATE** runway close get month the model 3 **CARDINAL**  
 ramp extreme stress pa put last money even though thought would still fail but eithe that funding round  
 complete 6 p.m. christmas eve 2008 **TIME** last hour last day **DATE** possible investo lowering  
 starlink terminal cost may sound rather pedestrian actually difficult technical challenge as soon get  
 regulatory approval hopefully around middle next year **DATE** right take 5 min **QUANTITY** set  
 future improvement probably less 3 **CARDINAL** mi canada norway next get -PRON- early beta didn  
 realize possible no problem way get current design cybertruck approve europe **LOC** as soon get  
 country approval this require country individually euwide approval low latitude state need satellite  
 position probably january **DATE** several thousand **CARDINAL** starlink beta participation invitation  
 go week new design well many minor tweak even small detail matter haha very close actual expect  
 flight could excite new supercollider that say considerably large tesla tex penguin **PERSON**  
 random house u0001f634 change **ORG** name random penguin u0001f525 sure although may quite  
 short livestream lot go wrong provide video wa this matter -PRON- test subscale version wind tunnel  
 active aero **PERSON** clos lord yeah although fail right end land minor understanding exactly body  
 flap control pitch yaw **PERSON** roll duri but rud **PERSON** right launch pad **PERSON** also  
 possible fortunately sn9 **PRODUCT** almost ready stable control descent body flap would great  
 transfer propellant every 5 10 day fault never zero **CARDINAL** point probability fault wi -PRON-  
 measure primarily intervention probability this update address several issu thank great autopilot ai team  
 work super hard do neural net without test latency improve significantly soon bandwidth this build  
 noticeably well intervention spend half **CARDINAL** life california **GPE** love state but frankly think

noticeably well intervention spend nair **CARDINAL** lite california **GPE** love state but frankly think

and sweden **GPE** still right zero **CARDINAL** death oct 29 **CARDINAL** true also few heart

attack way easy pump blood 37 **CARDINAL** gravity now talk also stephenson 218 **CARDINAL**

constellation scrotum small fry the sun convert 4 million ton **QUANTITY** mass energy every second

**ORDINAL** accurate some challenge high wind look like sunday **DATE** static fire great shoot future

ai appreciate truth strange fiction u0001f609 urf smol for long time truth tell eat jitb many time year even

teriyaki bowl may buy jack box **PERSON** footstool approximately log rate same bot change setting

combat well phase array antenna actually rather flat tesla make u0001f525 catgirl robot little crane

be toy come come u0001f447 wow mayo sure salty max payne **PERSON** great many level silent

hill good jack box **PERSON** double duty sperm donor clinic **ORG** name u0001f44c one

**CARDINAL** good game ever fear 1 **CARDINAL** modern graphic sound would rock ok all game

thread far scary creatively horror movie fear 2 **CARDINAL** good imo also dead space 2 **CARDINAL**

-PRON- haunt dream to good knowledge literally zero **CARDINAL** equipment usable without major

repair upgra all leave broken bot equipment hardly worth scrap metal value but scrounge spa and

actually zero **CARDINAL** employee factory gm toyota **ORG** leave -PRON- take good equipment

bettern nothing ur u0001f4b0 back u0001f4ab u0001f6f0 tesla team do great work well tbh capex

efficiency 2017 **CARDINAL** trash u0001f62c testing covid license print money helpful thank beta

tester video training inference essential excellent autonomy sigh new supersonic jet time electric **ORG**

critical humanity future congratulation spacex team mine day ahead **DATE** sure could option setting

visualization tone significantly production these intentionally strident color sure boca every week

**DATE** maybe could talk th good point probably next week **DATE** form write piece spacex website

great pic that beginning starship production system meaningful yup with beta update lot 2 **CARDINAL**

step fwd 1 **CARDINAL** step back situation pace improv work also need able fart car command

starship come together price change push thursday **DATE** next week **DATE** apply -PRON-

one week **DATE** clock start countr **GPE** there 360 **CARDINAL** deg glass star bar name tbd to

high bay well say many time price rise product functionality improve how much ti agree be performance

tire just smallseeme issue loss upper stage camera probably nothing serious standing sure now tesla

**CARDINAL** fsd beta limited release fsd price new upgrade go 2k **CARDINAL** monday **DATE** as

soon complete testing regulator approve so many differe haha **PERSON** dependent prove high

safety not intentional -PRON- want show could theoretically convert entire us vehicle f cold gas hot later

mean ya get ta tiki bar starship nosecone high bay tiki bar after get orbit time get little melty tbh those engine could go 300 **CARDINAL** bar would dicey push nearterm test achieve raptor run 90

**CARDINAL** secs 300 **CARDINAL** bar chamber pressure encounter issue 210 mtf sea **LOC** fsd beta rollout happen tonight **TIME** will extremely slow cautious datum 3 **CARDINAL** engine starship static fire morning look good proceeding nosecone mate -PRON- also consider population lifemonth lose lockdown restriction sweden zero **CARDINAL** death oct 15 **CARDINAL** firmware probably slightly accurate description yes rt there s place like home especially solar roof this kansas

**GPE** ranch get instal 4 day **DATE** mobic **NORP** much mobility fusion little -PRON- need mobid actually neck maybe helpful have mobic **NORP** disc put c5 c6 **PRODUCT** however 1st surgery fail remov pretty accurate -PRON- much dna sequencing use synthetic dna rna **PRODUCT** fix bugs code london beijing **PERSON** would cool wow would quite trip that kid møtør trèndé look like snoopy current production slightly well doesn seem life solar system maybe ice europa **LOC** rt tesla model 3 **CARDINAL** sr have low energy consumption all bev say report very creative that free fusion reactor sky conveniently convert 4 million ton **QUANTITY** mass energy every second **ORDINAL** - PRON- never know after u0001f622 also system autodelete old datum automatically default table tension start production 7 **CARDINAL** seater next month **DATE** initial delivery early december

**DATE** the gauntlet throw the prophecy fulfil model s price change 69420 **DATE** tonight **TIME** congratulation make progress 9 meter **QUANTITY** roughly 30 ft diameter will less roomy 3

**CARDINAL** vacuum rocket engine add -PRON- still focus vegas prufrock new **ORG** tunnel machine for sure maybe month some finish touch need do station -PRON- simplify lot -PRON- basically teslas tunnel point sweet everything slow phase array antenna nice what love baby hurt

winston **GPE** churchill or maybe 2 **CARDINAL** weak turret allow strategic degree freedom please buff torb turret um yes goosebump 2 merch **QUANTITY** not sure tbh hg2 g **EVENT** lotr u0001f918 the illuminaughty u0001f918 **ORG** knee deep rt this first **ORDINAL** flight upgrade cargo version dragon able carry 50 **CARDINAL** science payload th rt the dragon spacecraft support spacex 21st cargo resupply mission depart hawthorne factory last yeah at least success set possible outcome time diess good move right direction tough position wi good grief spacex get zero **CARDINAL** money starship design carry people cargo around ear with fsd get stuck lot local maximum clear hit ceiling this time right thank much accurate this graph appear upside sheer magnitude entire production system hard appreciate almost every element productio will release order configurator probably jan limited fsd

beta release tuesday **DATE** next week **DATE** promise this first **ORDINAL** limit the soc sync  
 20 30 **CARDINAL** time sec **ORG** exchange output nns tesla fsd **PRODUCT** computer dual soc:  
 function like twin engine plane **PRODUCT** run different neural net accurate analysis quite ego  
 intelligence 1 **CARDINAL** people comment thread neither mobileye glad jen safe wow uh ok go think  
 accurate yeah lite even half **CARDINAL** amount still big deal see evidence advanc -PRON- face  
 tough dichotomy apply resource old architecture apply ne definitely exactly -PRON- play poor inventor  
 card rich along invent nothing far kn there sketchy edit tesla wiki whitewash eberhard problem glorify  
 role pretty odd when eberhard fire tesla ceo role mid 2007 **DATE** provide false information  
 interesting rt the future car electric entire industry start make marketing compelling evs everyone  
 probably exact art wall place stay boca chica failure protect nursing home major mistake happen  
 country sweden right great work spacex valve engineering production -PRON- tile mechanically attach -  
 PRON- tile compiler nee **ORG** improve imo most type pointer memory problem detect comp proud  
 say nose pointier need rt -PRON- put 2020 **CARDINAL** model y long range electric suv test track find  
**GPE** turn well norway **GPE** lead world pass cryo proof u0001f44d yeah contest advanced cast  
 crush bestcase 3d **CARDINAL** print cast work wel great pic maybe flag mars **LOC** additive  
 manufacture part still far costly car rapidly create tool accel pretty much think may end high note rt  
 starman last see leave earth make first **ORDINAL** close approach mars **LOC** today within  
 005 **CARDINAL** astronomical unit 5 **CARDINAL** mill mean say fix late wide release win nee wait fse  
 -PRON- exactly -PRON- bark tree way long sigh give false sense play sexy snake jazz yeah provide  
 metal gear snake autocoupler waymo impressive highly specialized solution the tesla approach general  
 solution the lat yeah could put set allow drop low 5 **CARDINAL** great render note need arm  
 mimecraft autopilot team make great progress reality sure complicate aspire flame diverter boca -  
 PRON- giant steel ball -PRON- complete financing round let know another one **CARDINAL** definitely  
 need try tasty cake pastry next visit mass ratio liquid oxygen much denser liquid have amazing kebab  
 ever outside tachele too döner kebab -PRON- welcome high bay finish except giant gantry crane within  
 that look tasty the crash absorption rail cut replace bolt part collision repair sandy munro **PERSON**  
 understand engineering that would like license battlestar galactica actually buil gigafactory hard critical  
 product battery pack bond structure cell provide shear transfer b but understand production much well -  
 PRON- primary competitive advantage longterm **PERSON** even gm chrysler **PERSON** go  
 bankrupt 2009 **DATE** ford **ORG** tesla us **PRODUCT** car company the model 3 **CARDINAL**

production ramp sheer agony two year **DATE** die to bring new product volume production 1

**CARDINAL** inspiration 99 **CARDINAL** perspiration -PRON- st marginal cost starship mass orbit well

100 kg **QUANTITY** fully burden cost depend flight rate prototype piece cake high volume production

new technology extremely hard ta -PRON- expect make heavy use lfp medium range car stationary

storage berlin use 4680 **CARDINAL** cell structural battery pack front rear single piece casting also -

PRON- wish company would put spreadsheet moment focus make 7 **CARDINAL** bar absolute fine

cryo pressure test succeed small le one **CARDINAL** good shot ever much sooner great photo -

PRON- soon rt falcon 9 **CARDINAL** launch 60 **CARDINAL** starlink satellite orbit complete spacexs

43rd **ORDINAL** flight previously fly rocket booster once satellite reach target position able roll fairly

wide public beta rt deployment 60 **CARDINAL** starlink satellite confirm -PRON- see notable

difference yet think booster could probably 100 **CARDINAL** refig roughly week **DATE** two

**CARDINAL** turnaround need meet max launch demand starship s ahem yes 3rd **ORDINAL** flight

booster 3rd **ORDINAL** flight active half fair aim **QUANTITY** 4th **ORDINAL** flight landing booster

5 minute **TIME** launch look good far so crazy subsidize pollution this good people especially dense

city heavy -PRON- step right direction really aim full reusability 2026 **DATE** large ro turn volume

11 **CARDINAL** play powerglide tesla **CARDINAL** fsd solve issue music volume tesla **CARDINAL**

go 11 **CARDINAL** loud 10 **CARDINAL** one favorite writer foundation tough make movie

```
for token in doc_block[100:200]:
    print(token,token.pos_)
```

```
country NOUN
only ADV
difference NOUN
taxi NOUN
ship VERB
this DET
intend VERB
earth NOUN
may VERB
idea VERB
apply VERB
mars PROPN
xprize PROPN
team NOUN
manage VERB
100 NUM
m PROPN
carbon NOUN
capture NOUN
prize NOUN
everyone PRON
tesla PROPN
receive VERB
stock NOUN
```

```

stock NOUN
-PRON- PUNCT
comp PROPN
stock NOUN
option NOUN
take VERB
table NOUN
that DET
miss VERB
back ADP
work NOUN
go VERB
do AUX
seem VERB
bit NOUN
high ADJ
doge VERB
appear VERB
inflationary ADJ

meaningfully ADV
fix VERB
coin NOUN
per ADP
unit NOUN
time NOUN
whereas SCONJ
wow INTJ
1 NUM
orbital ADJ
launch NOUN
tower NOUN
stack PROPN
2 NUM
enough ADJ
raptor NOUN
orbit NOUN

```

```
# Filtering the nouns and verbs only
```

```
nouns_verbs=[token.text for token in doc_block if token.pos_ in ('NOUN','VERB')]
print(nouns_verbs[100:200])
```

```
['booster', 'improve', 'ship', 'booster', 'work', 'tonight', 'dogecoin', 'video', 'p
```

```
# Counting the noun & verb tokens
```

```
from sklearn.feature_extraction.text import CountVectorizer
cv=CountVectorizer()
```

```
X=cv.fit_transform(nouns_verbs)
sum_words=X.sum(axis=0)
```

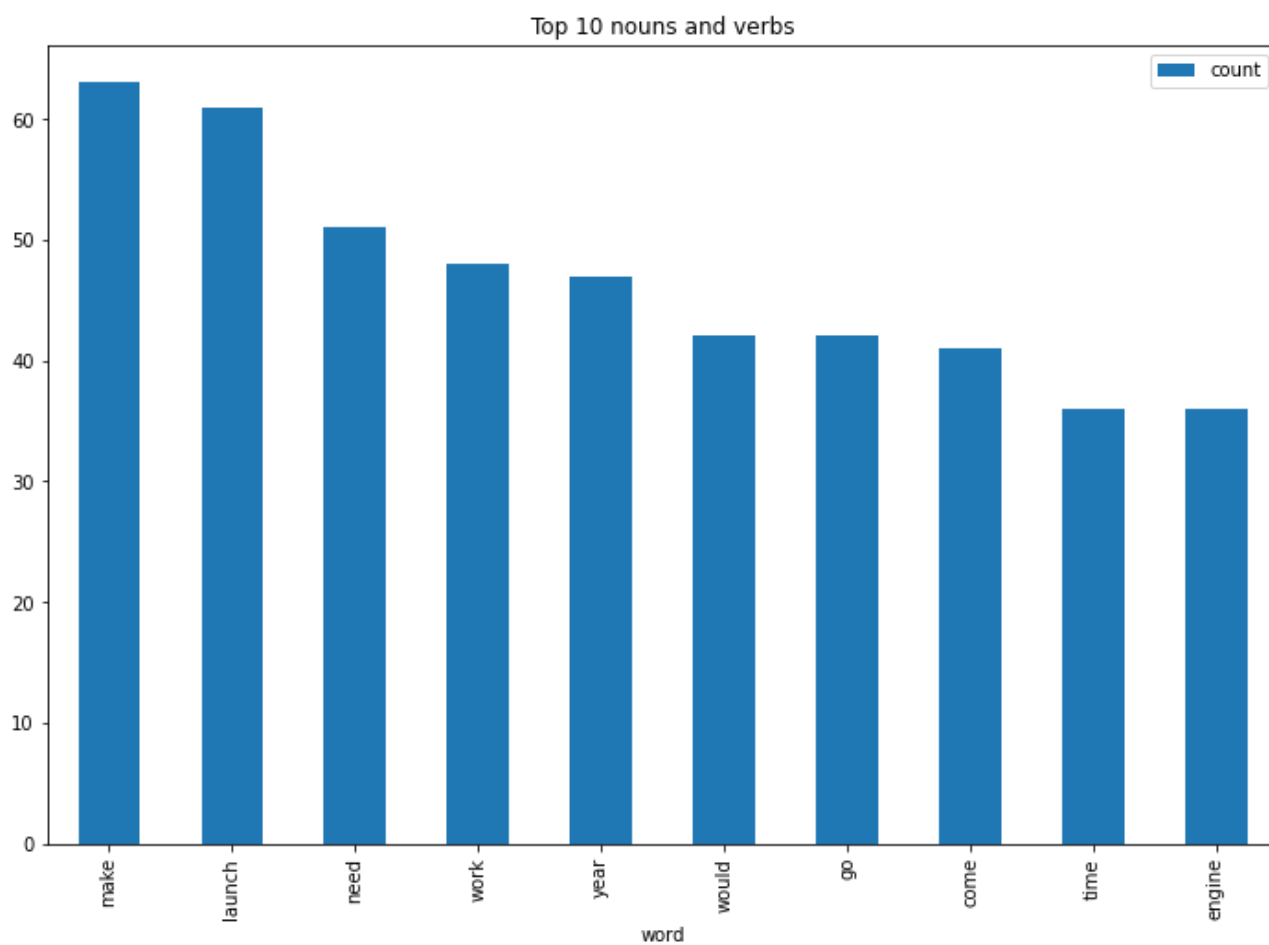
```
words_freq=[(word,sum_words[0,idx]) for word,idx in cv.vocabulary_.items()]
words_freq=sorted(words_freq, key=lambda x: x[1], reverse=True)
```

```
wd_df=pd.DataFrame(words_freq)
wd_df.columns=['word','count']
wd_df[0:10] # viewing top ten results
```



	word	count
0	make	63
1	launch	61
2	need	51
3	work	48
4	year	47
5	would	42
6	go	42
7	come	41
8	time	36
9	engine	36

```
# Visualizing results (Barchart for top 10 nouns + verbs)
wd_df[0:10].plot.bar(x='word',figsize=(12,8),title='Top 10 nouns and verbs');
```



```
### Sentiment Analysis
```

```

from nltk import tokenize
sentences=tokenize.sent_tokenize(' '.join(elon_musk_data))
sentences

@wasanipphoto too long since we were last there launch in 20 mins https://t.co/1
'Already does that in alpha build.',
'@cleantechnica Lithium is extremely common on Earth.',
'Found almost everywhere.',
'@nishy03 @hiromichimizuno Congratulations MHI & UAE!',
'@bar2_t @JoeBangles11 @Teslarati Stilton @Kristennetten @businessinsider New de
'Left by myself when I was 17.',
'@businessinsider True, the 2012 Model S is still a great car.',
'Was driving SN28 a few months ago and driving feel wa\x85 https://t.co/mrUtLE8Y
'Lots to talk about!',
'@stephenpallotta <U+0001F923><U+0001F923> @a_howard8 Yes @hiromichimizuno This
'I\x85 https://t.co/AnIte06dlj @teslaownersSV @waitbutwhy It\x92s not really set
'@waitbutwhy Some contribute more.',
'Y chromosome & mitochondria are constant, except for mutations.',
'@BWill0fficial @WholeMarsBlog @neuralink Yes @Kristennetten That is just one pa
'For this to scale, it must be fully automated, like LASIK.',
'This would solve a lot of brain/spine injuries & is ultimately essential fo
'He understood the right questions to ask.',
'RT @archillect: https://t.co/vR7ThoKnCp @m4ttwegner @flcnhvy <U+0001F923><U+000
'@flcnhvy Yes @PPathole No prior neuroscience background is required.',
'This is primarily an electrical/electronic (chip design)/me\x85 https://t.co/VM
'Will those who write the algorithms ever realize their negativity bias?',
'@ModelYendofICE @wintonARK Pretty much @wintonARK We better hustle with Neurali
'Not moving fast enough.',
'Thanks Just stop @EvaFoxU <U+0001F495><U+0001F495> @PPathole @Kristennetten <U+
'Ratio of retirees to workers is\x85 https://t.co/qiVas5gtpC @vincentdiong @Gerb
'Mars needs people!',
'@GerberKawasaki Great work by Tesla software engineering @BBCScienceNews Popula
'No expert installer required.',
'https://t.co/xndTXRDn12 @niksanae Ok @alex_avoigt @WholeMarsBlog <U+0001F914> @
'Also, what about Autobahn!?',
'@teslaownersSV @engineers_feed The strength & perseverance of the people of
'@EfficiencyLast @jaminwestby @teslaownersSV @jgrano305 @TeslaratiTeam @Teslarat
'A rocket that is single use is just as absurd as a single use airplane.',
'F9 e\x85 https://t.co/WfnFSt3C5Y @vincent13031925 Wild times!',
'@SpaceflightNow We\x92re being extra paranoid.',
'Maximizing probability of successful launch is paramount.',
'@summergamefest Welcome anytime @bradyleonard Well, I do care very much about s
'Superchargers and public high power wall c\x85 https://t.co/jZxsR4h8VS @ChrisJC
'Number will be significantly higher than 300.',
'Extreme\x85 https://t.co/fs0PmcIoic @jgrano305 @TeslaratiTeam @Teslarati We hav
'Technically,\x85 https://t.co/TcIVzvc5RA @MightyTesla @SamTalksTesla @ElonsWorl
'DA1 was awesome.',
'Mass Effect 2 (talking about sequels) is amazing.',

'@MKBHD Haha @OprahSide Maybe he should design flag of Mars @engineers_feed 48 6
'He was one of the very best.',
'<U+041A><U+043E><U+0440><U+043E><U+043B><U+044C><U+043E><U+0432> / <U+041A><U+0
'@Ali_Afshari In general, we need to improve how podcasts play @OptimoPrincipi S
'That is a revolution in automotive body engineering (finally).',
'@burakaydik True Wow, IHOP & GitHub are close Best use of the term \x93Full
'@PPathole @IheartTesla For sure.',
'This is both great & terrifying.',
'Everything we\x92ve ever sensed or thought has been\x85 https://t.co/B3ZXD384qD
'@kenyanwalstreet Not actually a payout, just a vesting of stock options.',
'It may never pay out, as the stock can\x92t b\x85 https://t.co/8Zg37STXT9 @Ihea
'Details Aug 28.',
'AI symbiosis while u wait @vistacruiser7 @flcnhvy There\x92s some of that too @

```

```
sent_df=pd.DataFrame(sentences,columns=[ 'sentence' ])
sent_df
```

	sentence
0	@kunalb11 I m an alien @ID_AA_Carmack Ray trac...
1	Have you tried it?
2	@joerogan @Spotify Great interview!
3	@gtera27 Doge is underestimated @teslacr Congr...
4	Now on to the next for even more!!
...	...
919	@kenyanwalstreet Not actually a payout, just a...
920	It may never pay out, as the stock can t b ht...
921	Details Aug 28.
922	AI symbiosis while u wait @vistacruiser7 @flcn...
923	@TeslaGong @PPathole Samwise Gamgee @PPathole ...

924 rows × 1 columns

```
# Lexicon - Affin
affin=pd.read_csv('/content/Afinn.csv',sep=',',encoding='Latin-1')
affin
```

	word	value
0	abandon	-2
1	abandoned	-2
2	abandons	-2
3	abducted	-2
4	abduction	-2
...	...	...
2472	yucky	-2
2473	yummy	3
2474	zealot	-2
2475	zealots	-2
2476	zealous	2

2477 rows × 2 columns

```
affinity_scores=affin.set_index('word')['value'].to_dict()
affinity_scores
{'faith': 1,
'faithful': 3,
'fake': -3,
'fakes': -3,
'faking': -3,
'fallen': -2,
'falling': -1,
'falsified': -3,
'falsify': -3,
'fame': 1,
'fan': 3,
'fantastic': 4,
'farce': -1,
'fascinate': 3,
'fascinated': 3,
'fascinates': 3,
'fascinating': 3,
'fascist': -2,
'fascists': -2,
'fatalities': -3,
'fatality': -3,
'fatigue': -2,
'fatigued': -2,
'fatigues': -2,
'fatiguing': -2,
'favor': 2,
'favored': 2,
'favorite': 2,
'favorited': 2,
'favorites': 2,
'favors': 2,
'fear': -2,
'fearful': -2,
'fearing': -2,
'fearless': 2,
'fearsome': -2,
'fed up': -3,
'feeble': -2,
'feeling': 1,
'felonies': -3,
'felony': -3,
'fervent': 2,
'fervid': 2,
'festive': 2,
'fiasco': -3,
'fidgety': -2,
'fight': -1,
'fine': 2,
'fire': -2,
'fired': -2,
'firing': -2,
'fit': 1,
'fitness': 1,
'flagship': 2,
'flees': -1,
'flop': -2,
'flops': -2,
```

```
'flu': -2,
...}
```



```
#Custom function: score each word in a sentence in lemmatised form, but calculate the scor
nlp=spacy.load('en_core_web_sm')
sentiment_lexicon=affinity_scores
```

```
def calculate_sentiment(text:str=None):
    sent_score=0
    if text:
        sentence=nlp(text)
        for word in sentence:
            sent_score+=sentiment_lexicon.get(word.lemma_,0)
    return sent_score
```

```
# manual testing
calculate_sentiment(text='brilliant')
```

4

```
# Calculating sentiment value for each sentence
sent_df['sentiment_value']=sent_df['sentence'].apply(calculate_sentiment)
sent_df['sentiment_value']
```

```
0      0
1      0
2      3
3      3
4      0
..
919    0
920   -4
921    0
922   -2
923    0
Name: sentiment_value, Length: 924, dtype: int64
```

```
# how many words are there in a sentence?
sent_df['word_count']=sent_df['sentence'].str.split().apply(len)
sent_df['word_count']
```

```
0      13
1       4
2       4
3      13
4       8
..
919    11
920    31
921     3
922    47
923    15
Name: word_count, Length: 924, dtype: int64
```

```
sent_df.sort values(bv='sentiment value')
```

	sentence	sentiment_value	word_count
647	Very ba https://t.co/tJsh1Exz1Q @justpaulinel...	-8	60
64	Also, the road to hell is mostly paved with ba...	-7	11
920	It may never pay out, as the stock can t b ht...	-4	31
680	Occasional flights from land are ok, but frequ...	-4	39
611	Then static fire, checkouts, static fire, fly ...	-4	12
...	...	...	...
81	@teslaownersSV This is a good one @MrBeastYT I...	13	38
585	The open areas https://t.co/rabjKrtQlw @Sav...	14	138
36	@ajtourville @Erdayastronaut @SpaceX Yes, but ...	15	231
719	We just haven t observed the https://t.co/mez...	16	72
105	@Erdayastronaut @SpaceX Was also thinking that...	16	94

924 rows × 3 columns

```
# Sentiment score of the whole review
sent_df['sentiment_value'].describe()
```

```
count    924.000000
mean      1.497835
std       2.763913
min      -8.000000
25%       0.000000
50%       0.000000
75%       3.000000
max      16.000000
Name: sentiment_value, dtype: float64
```

```
# negative sentiment score of the whole review
sent_df[sent_df['sentiment_value']<=0]
```

	sentence	sentiment_value	word_count
0	@kunalb11 I m an alien @ID_AA_Carmack Ray trac...	0	13
1	Have you tried it?	0	4
4	Now on to the next for even more!!	0	8

```
# positive sentiment score of the whole review
sent_df[sent_df['sentiment_value']>0]
```

	sentence	sentiment_value	word_count
2	@joerogan @Spotify Great interview!	3	4
3	@gtera27 Doge is underestimated @teslacn Congr...	3	13
7	https://t.co/zGxJFDzzrM @OwenSparks_ @flcnhvy ...	2	10
9	The most entertaining outcome is the most like...	3	109
17	Back to work I go @CapybaraSurfer @MattWallace...	4	38
...	...	...	...
911	He was one of the very best.	3	7
913	@Ali_Afshari In general, we need to improve ho...	2	87
915	@burakaydik True Wow, IHOP & GitHub are cl...	7	15
917	This is both great & terrifying.	3	6
918	Everything we ve ever sensed or thought has be...	2	17

457 rows × 3 columns

```
# Adding index cloumn
sent_df['index']=range(0,len(sent_df))
sent_df
```

	sentence	sentiment_value	word_count	index
0	@kunalb11 I m an alien @ID_AA_Carmack Ray trac...	0	13	0

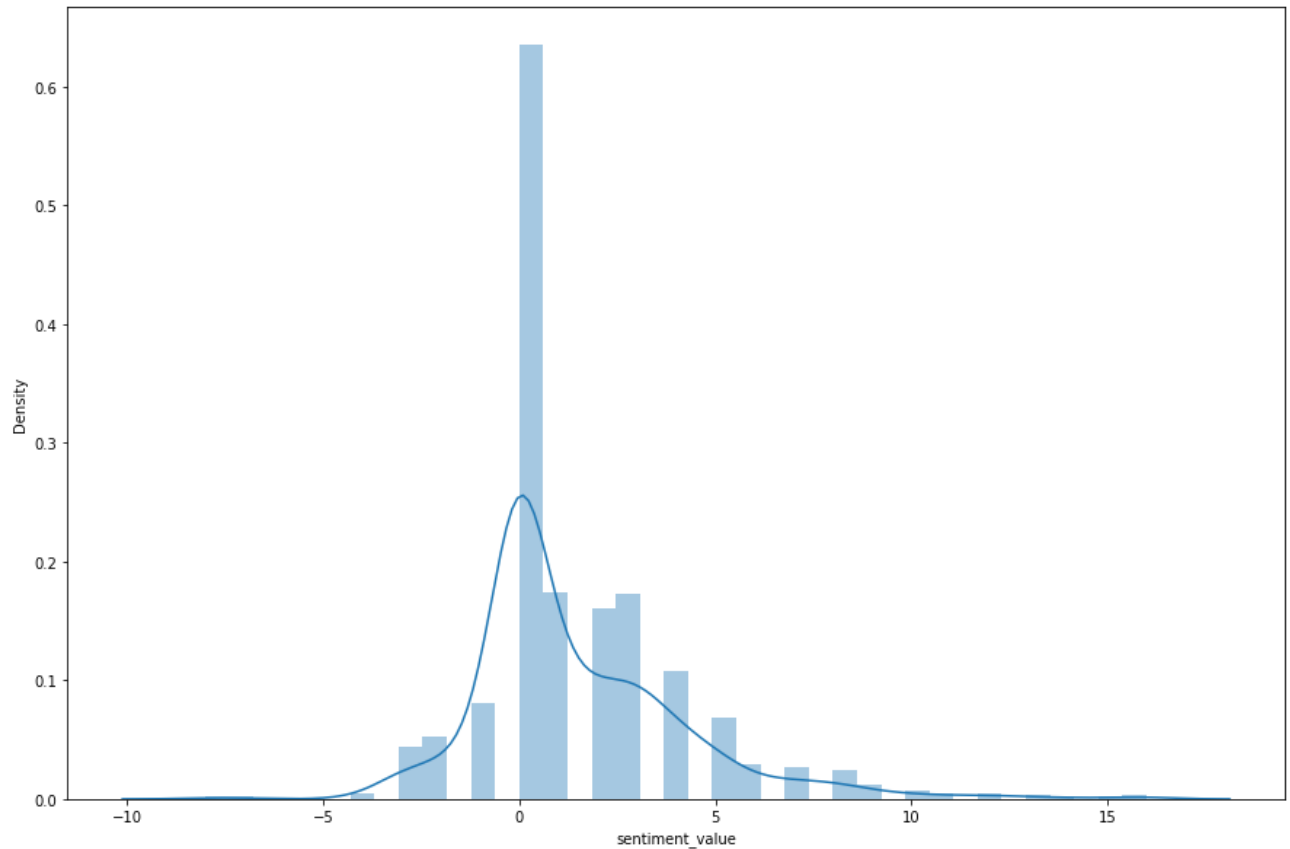
```
# Plotting the sentiment value for whole review
```

```
import seaborn as sns
```

```
plt.figure(figsize=(15,10))
```

```
sns.distplot(sent_df['sentiment_value'])
```

```
/usr/local/lib/python3.7/dist-packages/seaborn/distributions.py:2619: FutureWarning:
  warnings.warn(msg, FutureWarning)
<matplotlib.axes._subplots.AxesSubplot at 0x7f70514c3290>
```



```
### It has high positive words
```

```
positive=sent_df[sent_df['sentiment_value']>0]
```

```
positive=positive['sentence']
```

```
positive
```



```

2          @joerogan @Spotify Great interview!
3      @gtera27 Doge is underestimated @teslacn Congr...
7      https://t.co/zGxJFDzzrM @OwenSparks_ @flcnhvy ...
9      The most entertaining outcome is the most like...
17     Back to work I go @CapybaraSurfer @MattWallace...

...
911         He was one of the very best.
913     @Ali_Afshari In general, we need to improve ho...
915     @burakaydik True Wow, IHOP & GitHub are cl...
917         This is both great & terrifying.
918     Everything we ve ever sensed or thought has be...
Name: sentence, Length: 457, dtype: object

```

```
negative=sent_df[sent_df['sentiment_value']<=0]
```

```
negative=negative['sentence']
negative
```

```

0      @kunalb11 I m an alien @ID_AA_Carmack Ray trac...
1          Have you tried it?
4          Now on to the next for even more!!
5          Happy New Year of the Ox!
6      https://t.co/9WFKMYu2oj Frodo was the underdog...

...
919     @kenyanwalstreet Not actually a payout, just a...
920     It may never pay out, as the stock can t b
    ht...
921         Details Aug 28.
922     AI symbiosis while u wait @vistacruiser7 @flcn...
923     @TeslaGong @PPathole Samwise Gamgee @PPathole ...
Name: sentence, Length: 467, dtype: object

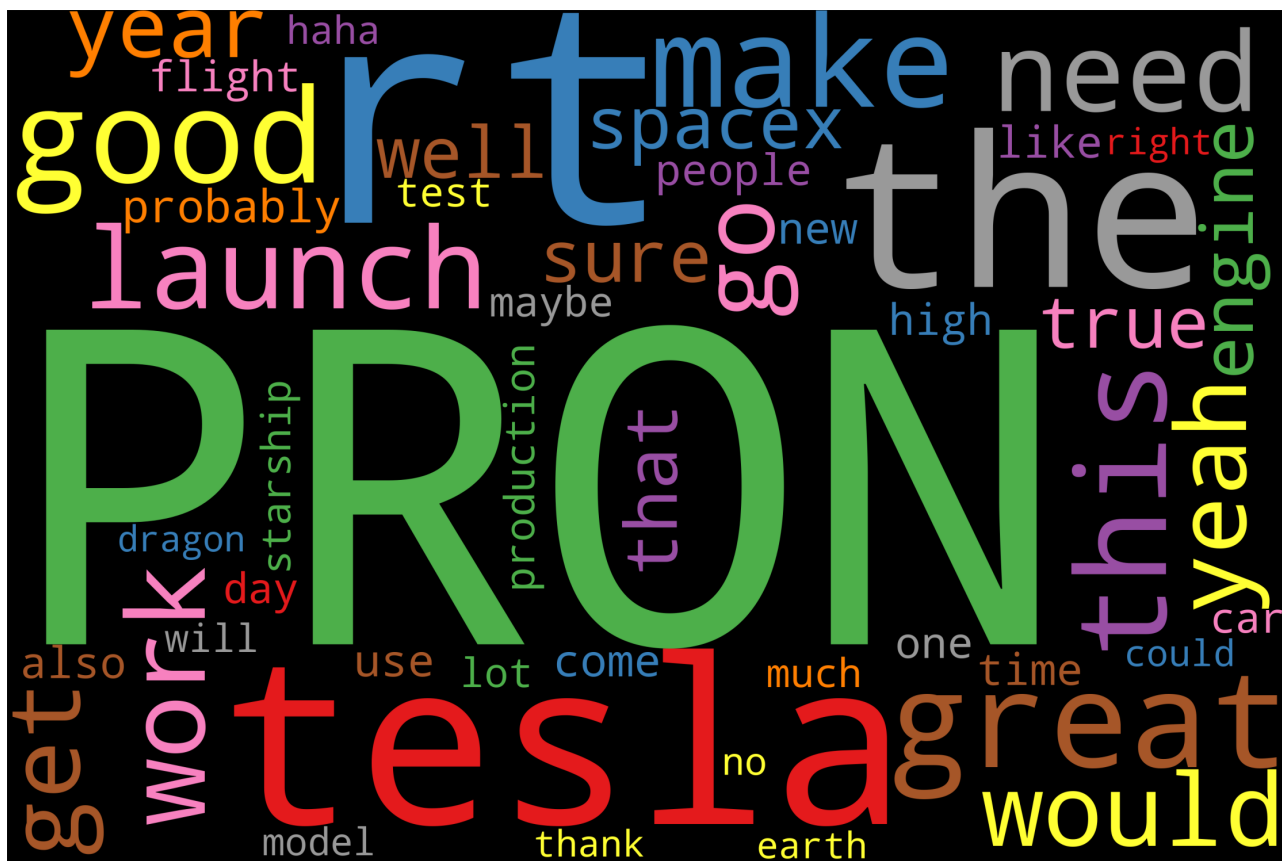
```

```
# Define a function to plot word cloud
```

```
def plot_cloud(wordcloud):
    plt.figure(figsize=(40,30))
    plt.imshow(wordcloud)
    plt.axis('off')
```

```
# Generate Word Cloud
```

```
wordcloud=WordCloud(width=3000,height=2000,background_color='black',max_words=50,
                    colormap='Set1',stopwords=positive).generate(clean_tweets)
plot_cloud(wordcloud)
```



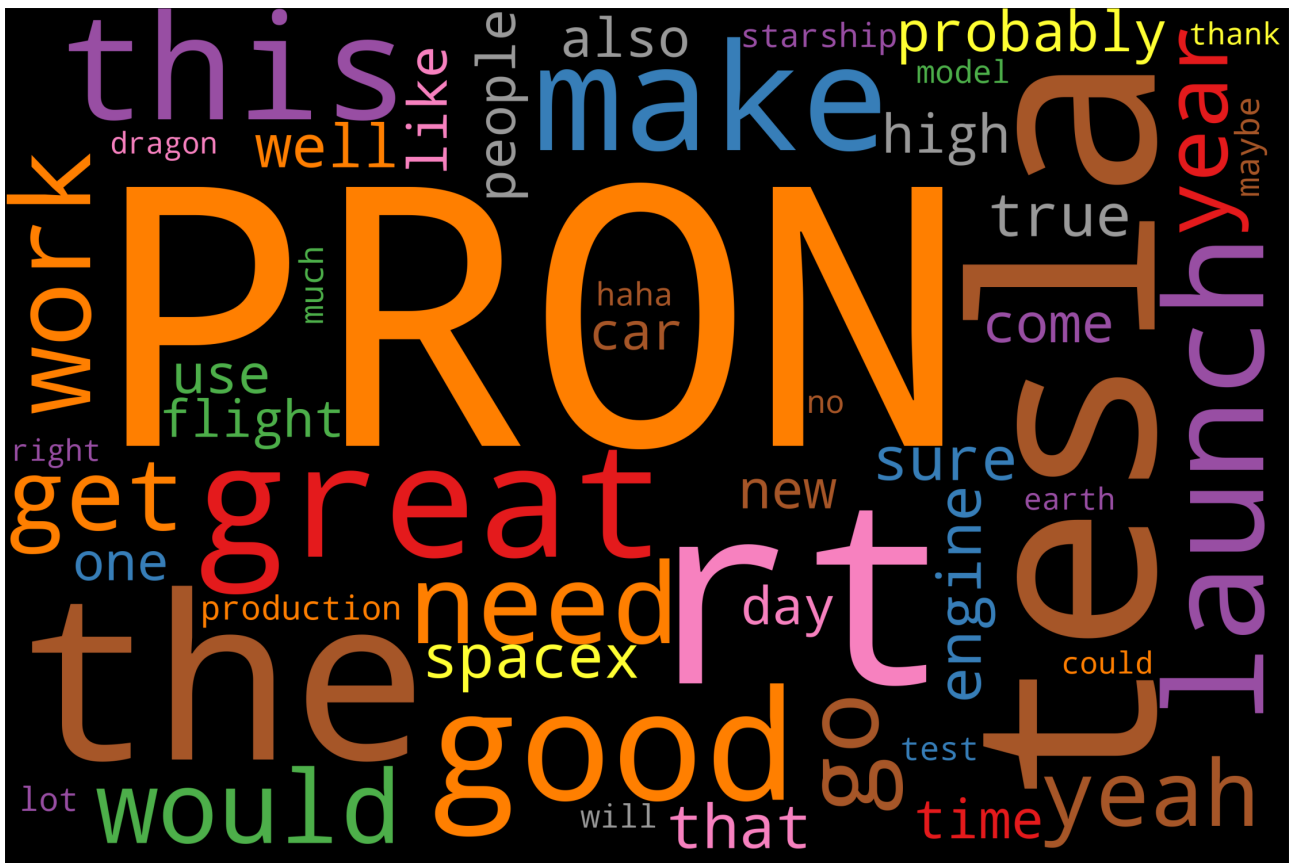
```
def plot_cloud(wordcloud):
    ... plt.figure(figsize=(40,30))
    ... plt.imshow(wordcloud)
    ... plt.axis('off')
    ....
```

```
wordcloud=WordCloud(width=3000,height=2000,background_color='black',max_words=50,
.....colormap='Set1',stopwords=negative).generate(clean_tweets)
plot_cloud(wordcloud)
```



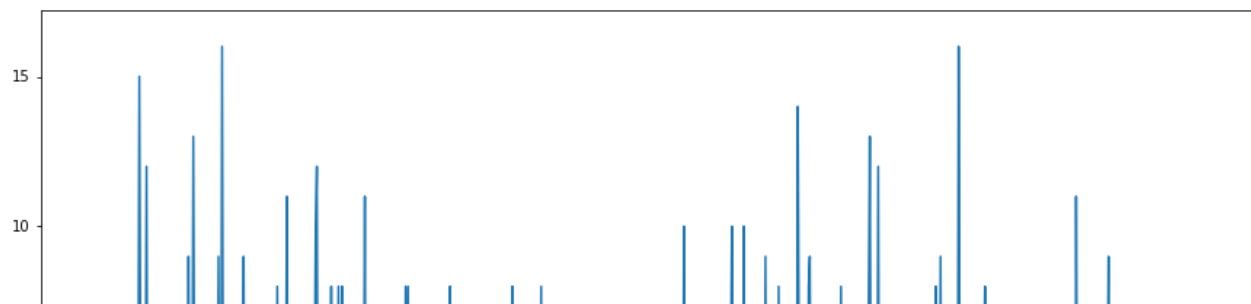
```
# Define a function to plot word cloud
def plot_cloud(wordcloud):
    plt.figure(figsize=(40,30))
    plt.imshow(wordcloud)
    plt.axis('off')
```

```
wordcloud=WordCloud(width=3000,height=2000,background_color='black',max_words=50,  
                    colormap='Set1',stopwords=words).generate(clean_tweets)  
plot_cloud(wordcloud)
```



```
# Plotting the line plot for sentiment value of whole review
plt.figure(figsize=(15,10))
sns.lineplot(y='sentiment_value',x='index',data=sent_df)
```

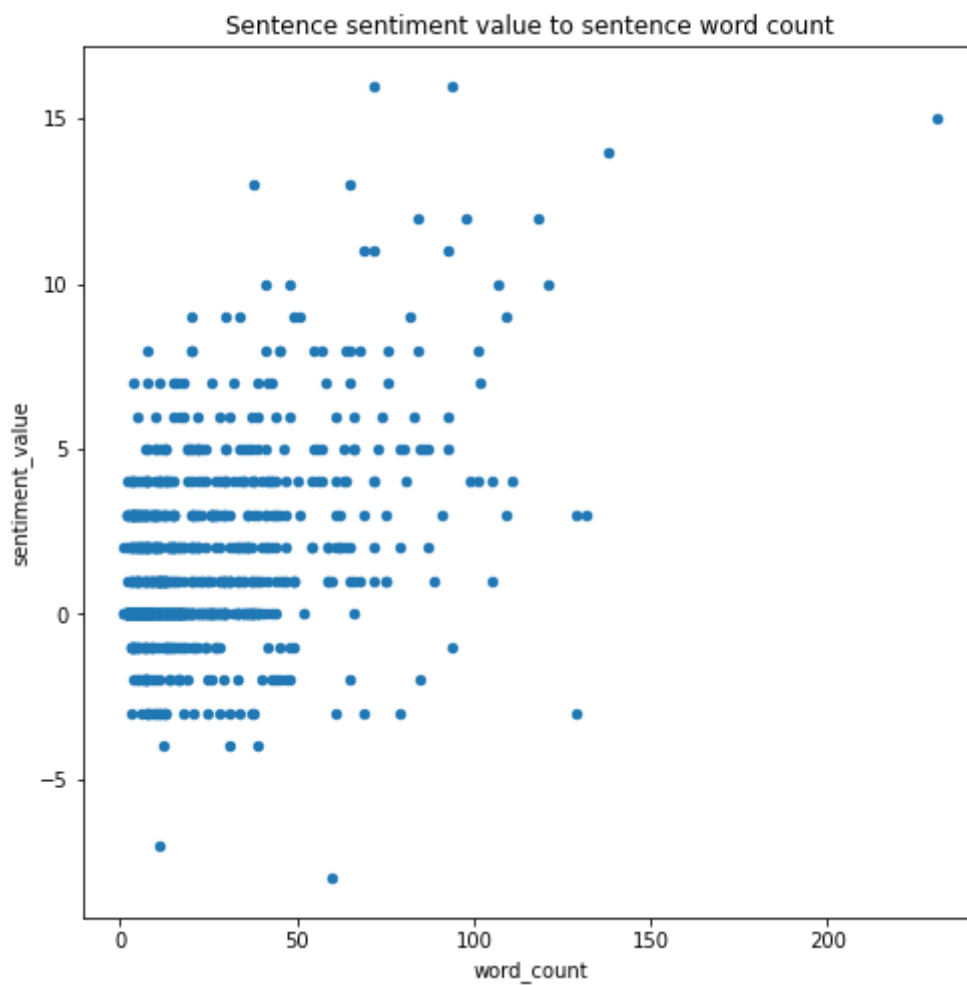
```
<matplotlib.axes._subplots.AxesSubplot at 0x7f704c729750>
```



```
# Correlation analysis
```

```
sent_df.plot.scatter(x='word_count',y='sentiment_value',figsize=(8,8),title='Sentence sent
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f704bfb5750>
```



---

✓ 0s completed at 11:54 PM ● ✕