

## ▼ Datasets for further Analysis - Preprocessed

1 #Extracting the Preprocessed Data for further Analysis

```

1 #Bitcoin Price
2 import pandas as pd
3
4 # URL to the raw CSV file
5 url = 'https://raw.githubusercontent.com/Amarpreet3/CIND-820-CAPSTONE/main/Sentimental%20Analysis/BitcoinPricePreprocessed.csv'
6
7 # Read the CSV file from the URL
8 crypto_usd = pd.read_csv(url)
9
10 # Display the first few rows of the data
11 print(crypto_usd.head())
12
13

```

	time	close	high	low	open	volumefrom	\
0	2023-02-19 13:00:00	24682.03	24715.82	24682.03	24707.39	903.97	
1	2023-02-19 14:00:00	24765.79	24792.85	24679.21	24682.03	1220.29	
2	2023-02-19 15:00:00	24928.21	25022.49	24751.96	24765.79	5074.50	
3	2023-02-19 16:00:00	24786.44	25175.28	24704.53	24928.21	7094.72	
4	2023-02-19 17:00:00	24364.95	24806.64	24346.17	24786.44	6896.84	

	volumeto	Date	Time	volume	marketcap	price_delta
0	2.233594e+07	2023-02-19	13:00:00	2.233504e+07	5.512964e+11	NaN
1	3.020300e+07	2023-02-19	14:00:00	3.0020178e+07	7.480012e+11	83.76
2	1.263085e+08	2023-02-19	15:00:00	1.263034e+08	3.148644e+12	162.42
3	1.770671e+08	2023-02-19	16:00:00	1.770600e+08	4.388863e+12	-141.77
4	1.693379e+08	2023-02-19	17:00:00	1.693310e+08	4.125910e+12	-421.49

1 import pandas as pd

```

2
3 Saved successfully!
4
5 https://github.com/Amarpreet3/CIND-820-CAPSTONE/raw/main/Sentimental%20Analysis/BitcoinTweetsPreprocessed_1.csv',
6 https://github.com/Amarpreet3/CIND-820-CAPSTONE/raw/main/Sentimental%20Analysis/BitcoinTweetsPreprocessed_2.csv',
7 https://github.com/Amarpreet3/CIND-820-CAPSTONE/raw/main/Sentimental%20Analysis/BitcoinTweetsPreprocessed_3.csv',
8 https://github.com/Amarpreet3/CIND-820-CAPSTONE/raw/main/Sentimental%20Analysis/BitcoinTweetsPreprocessed_4.csv',
9 https://github.com/Amarpreet3/CIND-820-CAPSTONE/raw/main/Sentimental%20Analysis/BitcoinTweetsPreprocessed_5.csv',
10 ]
11
12 dfs = []
13
14 for url in file_urls:
15     # Read the CSV file
16     df = pd.read_csv(url)
17
18     # Append the DataFrame to the list
19     dfs.append(df)
20
21 # Combine all DataFrames into a single DataFrame
22 combined_df = pd.concat(dfs)
23
24 # Display the first few rows of the combined DataFrame
25 print(combined_df.head())
26

```

	user_name	user_location	\
0	Irk	Vancouver, WA	
1	Xiang Zhang	NaN	
2	Rhizoo	NaN	
3	Hari Marquez	Las Vegas, NV	
4	Bitcoin Candle Bot	Brazil	

	user_description	user_created	\
0	Irk started investing in 1...	2018-08-11 03:17:00	
1	Professional Software Engineer & Crypto ...	2011-01-11 01:37:00	
2	researcher. local maxima dunningkruger spec...	2019-04-03 18:09:00	
3	Donât trust, verify. #Bitcoin   El Salvador ...	2014-01-17 23:04:00	
4	Robot that posts the closure of the bitcoin da...	2021-01-06 01:36:00	

	user_followers	user_friends	user_favourites	user_verified	\
--	----------------	--------------	-----------------	---------------	---

```

0      116.0        8.0    4580.0    False
1      42.0        22.0       5.0    False
2     778.0       627.0   32005.0    False
3     222.0       521.0  13052.0    False
4      40.0         4.0       1.0    False

          date                  text \
0 2023-02-25 23:59:00 bitcoin btc rest crypto ye bitcoin cryptocurr ...
1 2023-02-25 23:59:00 retriev invest fund current ongo tidexcoin kic...
2 2023-02-25 23:59:00 bull save monthli thread today good shit bitco...
3 2023-02-25 23:59:00           el salvador shape futur bitcoin membvk32cn
4 2023-02-25 23:59:00 cndl day 25022023 close open 2319406 high 232...

          hashtags            source \
0  ['Bitcoin', 'crypto', 'NeedsMoreCrash'] Twitter Web App
1  ['Tidexcoin', 'Kicurrency', 'LMY', 'GMK', 'SYR... Twitter for iPhone
2  ['bitcoin']    Twitter Web App
3  ['Bitcoin']    Twitter Web App
4  ['Bitcoin', 'Candle', 'BearMarket'] Bitcoin Candle Bot

  is_retweet compound      score sentiment_level polarity subjectivity
0      0.0  -0.4019 -2.154092e+05      Negative  0.000000  0.000000
1      0.0   0.0000  0.000000e+00      Neutral  0.000000  0.400000
2      0.0   0.3612  9.005682e+06      Positive  0.250000  0.700000
3      0.0   0.0000  0.000000e+00      Neutral  0.000000  0.000000
4      0.0  -0.2732 -2.240240e+01      Negative  0.053333  0.446667

```

```
1 tweets = combined_df.copy()
```

```
1 tweets.head()
```

	user_name	user_location	user_description	user_created	user_followers	user_friends	user_favourites	user_verified	date
0	Irk	Vancouver, WA	Irk started investing in the stock market in 1...	2018-08-11 03:17:00	116.0	8.0	4580.0	False	2023-02-25 23:59:00
			Professional Software Engineer	2011-01-11 01:37:00	42.0	22.0	5.0	False	2023-02-25 23:59:00
			Saved successfully! <span style="border: 1px solid #ccc; padding: 2px;">X</span>	... Crypto					
2	Rhizoo	NaN	researcher. local maxima dunningâ□kruger spec...	2019-04-03 18:09:00	778.0	627.0	32005.0	False	2023-02-25 23:59:00
3	Hari Marquez	Las Vegas, NV	Donâ□t trust, verify. #Bitcoin   El Salvador ...	2014-01-17 23:04:00	222.0	521.0	13052.0	False	2023-02-25 23:59:00
4	Bitcoin Candle Bot	Brazil	Robot that posts the closure of the bitcoin da...	2021-01-06 01:36:00	40.0	4.0	1.0	False	2023-02-25 23:59:00



```
1 print(tweets.columns)
```

```

Index(['user_name', 'user_location', 'user_description', 'user_created',
       'user_followers', 'user_friends', 'user_favourites', 'user_verified',
       'date', 'text', 'hashtags', 'source', 'is_retweet', 'compound', 'score',
       'sentiment_level', 'polarity', 'subjectivity'],
      dtype='object')

```

```

1 import pandas as pd
2
3
4 # Check the shape of the dataset
5 print("Shape of the dataset:", tweets.shape)
6
7 # Check the size of the dataset

```

```
8 print("Size of the dataset (number of elements):", tweets.size)
```

```
9
```

Shape of the dataset: (167652, 18)

Size of the dataset (number of elements): 3017736

```
1 import pandas as pd
```

```
2 import os
```

```
3
```

```
4
```

```
5 # Check the shape of the data
```

```
6 print("Shape of the data:", tweets.shape)
```

```
7
```

Shape of the data: (167652, 18)

```
1 label_counts = tweets['sentiment_level'].value_counts()
```

```
2 print(label_counts)
```

Neutral 93169

Positive 35921

Extreme Positive 17343

Negative 15903

Extreme Negative 5316

Name: sentiment\_level, dtype: int64

```
1 #Crypto - Bitcoin
```

```
2 crypto_usd.head(2)
```

```
3
```

	time	close	high	low	open	volumefrom	volumeto	Date	Time	volume	marketcap	price_delta
0	2023-02-19 13:00:00	24682.03	24715.82	24682.03	24707.39	903.97	22335943.28	2023-02-19	13:00:00	22335039.31	5.512964e+11	NaN
1	2023-02-19 14:00:00	24705.70	24702.95	24670.21	24692.02	1220.20	20202001.55	2023-02-19	14:00:00	20201791.26	7.180012e+11	0.27%

Saved successfully!

```
3 tweets.head(2)
```

	user_name	user_location	user_description	user_created	user_followers	user_friends	user_favourites	user_verified	date
0	Irk	Vancouver, WA	Irk started investing in the stock market in 1...	2018-08-11 03:17:00	116.0	8.0	4580.0	False	2023-02-25 23:59:00
1	Xiang Zhang	NaN	Professional Software Engineer at Crypto	2011-01-11 01:37:00	42.0	22.0	5.0	False	2023-02-25 23:59:00



## ▼ Exploratory Data Analysis (EDA)

### ▼ Data Description

```
1 print(type(df))
```

<class 'pandas.core.frame.DataFrame'>

```
1 df.head(2)
```

	user_name	user_location	user_description	user_created	user_followers	user_friends	user_favourites	user_verified	date
0	Bitcoin Treasures δ□□□	Bitcoin City	I am a bot tracking the USD value of various b...	2020-08-23 16:20:00	2603.0	8.0	48.0	False	2023-03-04 20:00:00 world
1	Bitcoin Price	Order Book	\$BTC price updated every 4 hours\nPrices in ...	2022-03-25 08:31:00	16.0	0.0	2.0	False	2023-03-04 20:00:00 ;

2 rows × 21 columns

1

```

1 import pandas as pd
2
3 # Iterate through each attribute
4 for column in df.columns:
5     unique_count = df[column].nunique()
6     print(f"Unique count for attribute '{column}': {unique_count}")
7

```

```

Unique count for attribute 'user_name': 36053
Unique count for attribute 'user_location': 9432
Unique count for attribute 'user_description': 33094
Unique count for attribute 'user_created': 36531
Unique count for attribute 'user_followers': 11793
Unique count for attribute 'user_friends': 5190
Unique count for attribute 'user_favourites': 17427
Unique count for attribute 'user_verified': 2
Unique count for attribute 'date': 10215
    'text': 162425
Saved successfully!      'hashtags': 40623
    'source': 719
Unique count for attribute 'is_retweet': 1
Unique count for attribute 'compound': 1716
Unique count for attribute 'score': 56006
Unique count for attribute 'sentiment_level': 5
Unique count for attribute 'polarity': 2584
Unique count for attribute 'subjectivity': 2594

```

1 df.columns

```

Index(['user_name', 'user_location', 'user_description', 'user_created',
       'user_followers', 'user_friends', 'user_favourites', 'user_verified',
       'date', 'text', 'hashtags', 'source', 'is_retweet', 'compound', 'score',
       'sentiment_level', 'polarity', 'subjectivity'],
      dtype='object')

```

1 df['sentiment\_level'].value\_counts()

```

Neutral           93169
Positive          35921
Extreme Positive  17343
Negative          15903
Extreme Negative   5316
Name: sentiment_level, dtype: int64

```

```

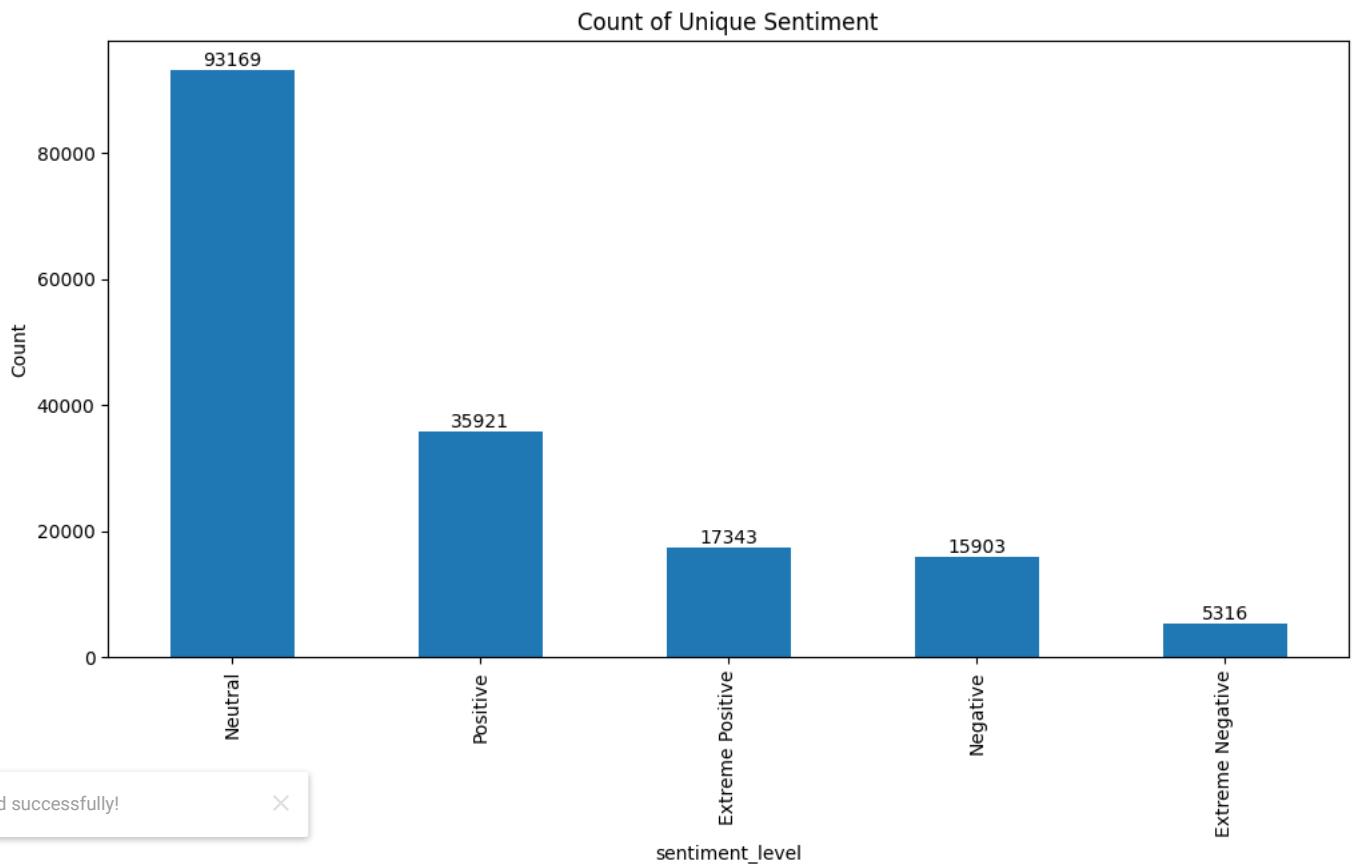
1 import matplotlib.pyplot as plt
2
3 counts = df['sentiment_level'].value_counts()
4
5 # Plotting the bar chart
6 plt.figure(figsize=(12, 6))
7 ax = counts.plot(kind='bar')
8 plt.xlabel('sentiment_level')
9 plt.ylabel('Count')
10 plt.title('Count of Unique Sentiment')
11 plt.xticks(rotation=90)
12

```

```

13 # Labeling the height on top of each bar
14 for p in ax.patches:
15     ax.annotate(str(p.get_height()), (p.get_x() + p.get_width() / 2, p.get_height()), ha='center', va='bottom')
16
17 plt.show()
18

```



```

1
2 print(df.dtypes)

user_name      object
user_location   object
user_description object
user_created    object
user_followers  float64
user_friends    float64
user_favourites float64
user_verified   bool
date           object
text            object
hashtags       object
source          object
is_retweet      float64
compound        float64
score           float64
sentiment_level object
polarity        float64
subjectivity    float64
dtype: object

```

```

1
2 # Get the shape of the merged dataset
3 rows, columns = df.shape
4 print("Number of rows:", rows)
5 print("Number of columns:", columns)

```

Number of rows: 167652  
 Number of columns: 18

```

1 # Displaying the summary information
2 summary = df.info()

```

```

3 print(summary)
4

<class 'pandas.core.frame.DataFrame'>
Int64Index: 167652 entries, 0 to 27941
Data columns (total 18 columns):
 #   Column           Non-Null Count  Dtype  
--- 
 0   user_name        167642 non-null   object  
 1   user_location     83349 non-null   object  
 2   user_description  157323 non-null   object  
 3   user_created      167652 non-null   object  
 4   user_followers    167652 non-null   float64 
 5   user_friends      167652 non-null   float64 
 6   user_favourites   167652 non-null   float64 
 7   user_verified     167652 non-null   bool    
 8   date              167652 non-null   object  
 9   text               167652 non-null   object  
 10  hashtags          167142 non-null   object  
 11  source             167142 non-null   object  
 12  is_retweet        167142 non-null   float64 
 13  compound           167652 non-null   float64 
 14  score              167652 non-null   float64 
 15  sentiment_level   167652 non-null   object  
 16  polarity            167652 non-null   float64 
 17  subjectivity       167652 non-null   float64 
dtypes: bool(1), float64(8), object(9)
memory usage: 23.2+ MB
None

```

```

1 # Let's see meta information about numeric data, we can also see if there any extreme values
2 df.describe()

```

	user_followers	user_friends	user_favourites	is_retweet	compound	score	polarity	subjectivity
<b>count</b>	1.676520e+05	167652.000000	1.676520e+05	167142.0	167652.000000	1.676520e+05	167652.000000	167652.000000
<b>mean</b>	1.069845e+04	774.246069	6.267079e+03	0.0	0.105530	3.260548e+07	0.069989	0.246614
<b>std</b>	1.317029e+05	2691.620939	2.192673e+04	0.0	0.339531	1.440558e+09	0.223690	0.271300
Saved successfully!								
<b>25%</b>	1.190000e+02	9.000000	1.100000e+01	0.0	0.000000	0.000000e+00	0.000000	0.000000
<b>50%</b>	5.560000e+02	123.000000	2.810000e+02	0.0	0.000000	0.000000e+00	0.000000	0.223016
<b>75%</b>	1.956000e+03	606.000000	3.300000e+03	0.0	0.361200	7.648344e+03	0.100000	0.418182
<b>max</b>	1.878937e+07	254276.000000	1.083014e+06	0.0	0.984000	1.350093e+11	1.000000	1.000000

```

1 df.describe().transpose()

```

	count	mean	std	min	25%	50%	75%	max
<b>user_followers</b>	167652.0	1.069845e+04	1.317029e+05	0.000000e+00	119.0	556.000000	1956.000000	1.878937e+07
<b>user_friends</b>	167652.0	7.742461e+02	2.691621e+03	0.000000e+00	9.0	123.000000	606.000000	2.542760e+05
<b>user_favourites</b>	167652.0	6.267079e+03	2.192673e+04	0.000000e+00	11.0	281.000000	3300.000000	1.083014e+06
<b>is_retweet</b>	167142.0	0.000000e+00	0.000000e+00	0.000000e+00	0.0	0.000000	0.000000	0.000000e+00
<b>compound</b>	167652.0	1.055299e-01	3.395308e-01	-9.913000e-01	0.0	0.000000	0.361200	9.840000e-01
<b>score</b>	167652.0	3.260548e+07	1.440558e+09	-9.459832e+10	0.0	0.000000	7648.344025	1.350093e+11
<b>polarity</b>	167652.0	6.998889e-02	2.236899e-01	-1.000000e+00	0.0	0.000000	0.100000	1.000000e+00
<b>subjectivity</b>	167652.0	2.466140e-01	2.712997e-01	0.000000e+00	0.0	0.223016	0.418182	1.000000e+00

## ▼ Analysing Null/NAN values

```

1 df.isnull().sum()

```

user_name	10
user_location	84303
user_description	10329
user_created	0
user_followers	0

```

user_friends      0
user_favourites   0
user_verified     0
date              0
text              0
hashtags         510
source            510
is_retweet        510
compound          0
score             0
sentiment_level   0
polarity          0
subjectivity      0
dtype: int64

```

```
1 #Null values for attributes which are not significant, so keepin the dataset unaltered
```

```
1 df.isnull().count()
```

```

user_name         27942
user_location     27942
user_description  27942
user_created      27942
user_followers    27942
user_friends      27942
user_favourites   27942
user_verified     27942
date              27942
text              27942
hashtags         27942
source            27942
is_retweet        27942
compound          27942
score             27942
sentiment_level   27942
polarity          27942
subjectivity      27942
dtype: int64

```

Saved successfully! 

```

1 # Display summary statistics of numeric columns
2 numeric_columns = df.select_dtypes(include=[int, float])
3 summary_statistics = numeric_columns.describe()
4 print("Summary Statistics:")
5 print(summary_statistics)

```

```

Summary Statistics:
   user_followers  user_friends  user_favourites  is_retweet \
count  1.676520e+05  167652.000000  1.676520e+05  167142.0
mean   1.069845e+04   774.246069   6.267079e+03   0.0
std    1.317029e+05   2691.620939   2.192673e+04   0.0
min    0.000000e+00   0.000000   0.000000e+00   0.0
25%   1.190000e+02    9.000000   1.100000e+01   0.0
50%   5.560000e+02   123.000000   2.810000e+02   0.0
75%   1.956000e+03   606.000000   3.300000e+03   0.0
max   1.878937e+07  254276.000000   1.083014e+06   0.0

   compound       score      polarity  subjectivity
count  167652.000000  1.676520e+05  167652.000000  167652.000000
mean   0.105530  3.260548e+07   0.069989   0.246614
std    0.339531  1.440558e+09   0.223690   0.271300
min   -0.991300 -9.459832e+10  -1.000000   0.000000
25%   0.000000  0.000000e+00   0.000000   0.000000
50%   0.000000  0.000000e+00   0.000000   0.223016
75%   0.361200  7.648344e+03   0.100000   0.418182
max   0.984000  1.350093e+11   1.000000   1.000000

```

## ▼ Categorical to One-Hot (numeric) Encoding

```

1 #Let's create a list for our categorical columns
2 #cat_cols=["Name", "Symbol", "Date"]

```

```
1 # Create a copy of the data frame in memory with a different name
2 #df_onehot=df.copy()
```

```

3 #convert only categorical variables/features to dummy/one-hot features
4 #df_onehot = pd.get_dummies(df, columns=cat_cols, prefix = cat_cols)
5 #print the dataset
6 #df_onehot

1 #Will do Unigram and Bigram for 'text'

```

## ▼ Pandas Profiling

```

1 #!pip install pandas-profiling
2

1 #from pandas_profiling import ProfileReport
2 #profile = ProfileReport(df)

1 #profile.to_notebook_iframe()

```

## ▼ Univariate Analysis

```

1 import matplotlib.pyplot as plt
2 # Univariate analysis for user_created
3 df['user_created'] = pd.to_datetime(df['user_created'])
4 df['user_created_year'] = df['user_created'].dt.year
5 user_created_counts = df['user_created_year'].value_counts().sort_index()
6 user_created_counts.plot(kind='bar')
7 plt.xlabel('User Creation Year')
8 plt.ylabel('Frequency')
9 plt.title('Distribution of User Creation Years')
10 plt.show()
11
12 # Univariate analysis for user_followers
13 followers = df['user_followers'].describe()
14 print(followers)
15
16 plt.hist(df['user_followers'], bins=20)
17 plt.xlabel('User Followers')
18 plt.ylabel('Frequency')
19 plt.title('Distribution of User Followers')
20 plt.show()
21
22 # Univariate analysis for user_friends
23 user_friends_stats = df['user_friends'].describe()
24 print(user_friends_stats)
25
26 plt.hist(df['user_friends'], bins=20)
27 plt.xlabel('User Friends')
28 plt.ylabel('Frequency')
29 plt.title('Distribution of User Friends')
30 plt.show()
31
32 # Univariate analysis for user_favourites
33 user_favourites_stats = df['user_favourites'].describe()
34 print(user_favourites_stats)
35
36 plt.hist(df['user_favourites'], bins=20)
37 plt.xlabel('User Favorites')
38 plt.ylabel('Frequency')
39 plt.title('Distribution of User Favorites')
40 plt.show()
41
42 # Univariate analysis for user_verified
43 user_verified_counts = df['user_verified'].value_counts()
44 user_verified_counts.plot(kind='bar')
45 plt.xlabel('User Verified')
46 plt.ylabel('Frequency')
47 plt.title('Distribution of User Verification')
48 plt.show()
49
50 # Univariate analysis for date

```

```
51 df['date'] = pd.to_datetime(df['date'])
52 df['date_year'] = df['date'].dt.year
53 date_counts = df['date_year'].value_counts().sort_index()
54 date_counts.plot(kind='bar')
55 plt.xlabel('Year')
56 plt.ylabel('Frequency')
57 plt.title('Distribution of Tweets over Time')
58 plt.show()
59
60 # Univariate analysis for text
61 df['text_length'] = df['text'].apply(lambda x: len(x))
62 text_length_stats = df['text_length'].describe()
63 print(text_length_stats)
64
65 plt.hist(df['text_length'], bins=20)
66 plt.xlabel('Text Length')
67 plt.ylabel('Frequency')
68 plt.title('Distribution of Text Lengths')
69 plt.show()
70
71 # Univariate analysis for hashtags - Will Perform word cloud analysis
```

Saved successfully! ×

```
1 # Univariate analysis for source
2 #source_counts = df['source'].value_counts()
```

```
3 #source_counts.plot(kind='bar')
4 #plt.xlabel('Tweet Source')
5 #plt.ylabel('Frequency')
6 #plt.title('Distribution of Tweet Sources')
7 #plt.show()
8000 |
```

1

```
2 # Univariate analysis for is_retweet
3 is_retweet_counts = df['is_retweet'].value_counts()
4 is_retweet_counts.plot(kind='bar')
5 plt.xlabel('Is Retweet')
6 plt.ylabel('Frequency')
7 plt.title('Distribution of Retweets')
8 plt.show()
9
```

10 # Univariate analysis for compound

```
11 compound_stats = df['compound'].describe()
12 print(compound_stats)
13
```

14 plt.hist(df['compound'], bins=20)
15 plt.xlabel('Compound Sentiment Score')
16 plt.ylabel('Frequency')
17 plt.title('Distribution of Compound Sentiment Scores')
18 plt.show()
19

20 # Univariate analysis for score

```
21 score_stats = df['score'].describe()
22 print(score_stats)
23
```

24 plt.hist(df['score'], bins=20)
25 plt.xlabel('Sentiment Score')
26 plt.ylabel('Frequency')
27 plt.title('Distribution of Sentiment Scores')
28 plt.show()
29

30 # Univariate analysis for sentiment\_level

```
31 sentiment_level_counts = df['sentiment_level'].value_counts()
32 plt.bar(sentiment_level_counts.index, sentiment_level_counts.values, label='bar')
Saved successfully!
```

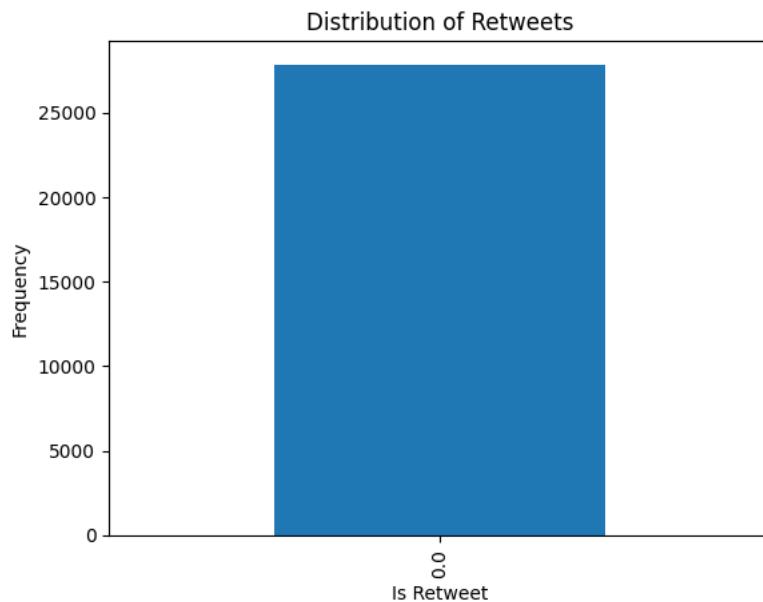
33 plt.ylabel('Frequency')
34 plt.title('Distribution of Sentiment Levels')
35 plt.show()
36

37

38 # Univariate analysis for polarity

```
39 polarity_stats = df['polarity'].describe()
40 print(polarity_stats)
41
```

42 plt.hist(df['polarity'], bins=20)
43 plt.xlabel('Polarity')
44 plt.ylabel('Frequency')
45 plt.title('Distribution of Polarity')
46 plt.show()
47



```

count    27942.000000
mean     0.102366
std      0.343487
min     -0.976100
25%     0.000000
50%     | 0.000000

```

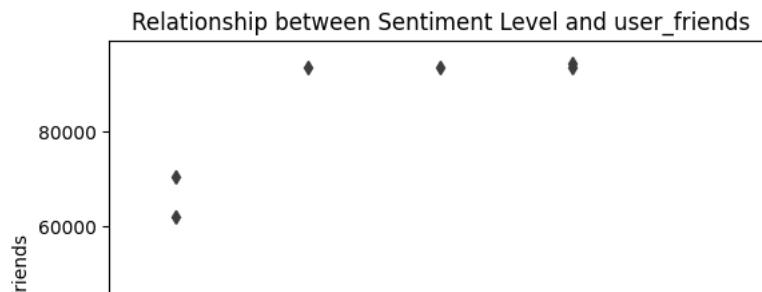
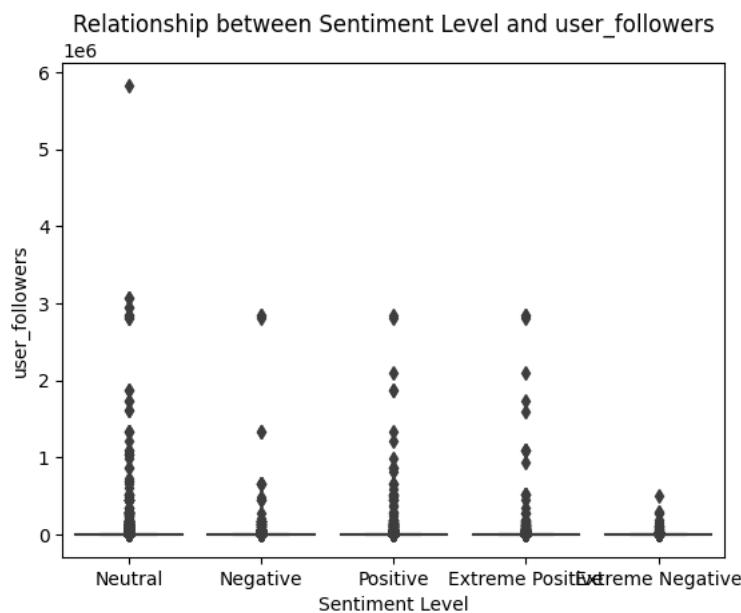
## ▼ Bivariate Analysis

Distribution of Compound Sentiment Scores

```

1 #Bivariate Analysis of sentiment_level with other attributes
|                                |
| Saved successfully!           | bivariate analysis
|                                |
4 attribute_pairs = [
5   ('sentiment_level', 'user_followers'),
6   ('sentiment_level', 'user_friends'),
7   ('sentiment_level', 'is_retweet'),
8   ('sentiment_level', 'compound'),
9   ('sentiment_level', 'score'),
10  ('sentiment_level', 'polarity'),
11  ('sentiment_level', 'subjectivity'),
12
13 ]
14
15 # Perform bivariate analysis for each attribute pair
16 for attr_x, attr_y in attribute_pairs:
17   df['sentiment_level'] = df['sentiment_level'].astype(str) # Convert sentiment_level to string type
18   sns.boxplot(x=attr_x, y=attr_y, data=df)
19   plt.xlabel('Sentiment Level')
20   plt.ylabel(attr_y)
21   plt.title(f'Relationship between Sentiment Level and {attr_y}')
22   plt.show()
23

```



Saved successfully!

```
1 !pip install seaborn
2 !pip install matplotlib
3
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Requirement already satisfied: seaborn in /usr/local/lib/python3.10/dist-packages (0.12.2)
Requirement already satisfied: numpy!=1.24.0,>=1.17 in /usr/local/lib/python3.10/dist-packages (from seaborn) (1.22.4)
Requirement already satisfied: pandas>0.25 in /usr/local/lib/python3.10/dist-packages (from seaborn) (1.5.3)
Requirement already satisfied: matplotlib!=3.6.1,>=3.1 in /usr/local/lib/python3.10/dist-packages (from seaborn) (3.7.1)
Requirement already satisfied: contourpy>=1.0.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (1.1)
Requirement already satisfied: cycler>=0.10 in /usr/local/lib/python3.10/dist-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (0.11.0)
Requirement already satisfied: fonttools>=4.22.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (4.)
Requirement already satisfied: kiwisolver>=1.0.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (1.)
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (23.1)
Requirement already satisfied: pillow>=6.2.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (8.4.0)
Requirement already satisfied: pyparsing>=2.3.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (3.1)
Requirement already satisfied: python-dateutil>=2.7 in /usr/local/lib/python3.10/dist-packages (from matplotlib!=3.6.1,>=3.1->seaborn)
Requirement already satisfied: pytz>=2020.1 in /usr/local/lib/python3.10/dist-packages (from pandas>=0.25->seaborn) (2022.7.1)
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.10/dist-packages (from python-dateutil>=2.7->matplotlib!=3.6.1,>=3.1->
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Requirement already satisfied: matplotlib in /usr/local/lib/python3.10/dist-packages (3.7.1)
Requirement already satisfied: contourpy>=1.0.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (1.1.0)
Requirement already satisfied: cycler>=0.10 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (0.11.0)
Requirement already satisfied: fonttools>=4.22.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (4.40.0)
Requirement already satisfied: kiwisolver>=1.0.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (1.4.4)
Requirement already satisfied: numpy>=1.20 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (1.22.4)
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (23.1)
Requirement already satisfied: pillow>=6.2.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (8.4.0)
Requirement already satisfied: pyparsing>=2.3.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (3.1.0)
Requirement already satisfied: python-dateutil>=2.7 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (2.8.2)
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.10/dist-packages (from python-dateutil>=2.7->matplotlib) (1.16.0)
```

1 #Some Visualizations of attributes for analysis

```
1 import seaborn as sns
2 import matplotlib.pyplot as plt
3
4 # Scatter plot
5 sns.scatterplot(data=df, x='user_followers', y='user_friends')
6 plt.title('Scatter Plot: User Followers vs User Friends')
7 plt.show()
8
9 # Box plot
10 sns.boxplot(data=df, x='user_verified', y='user_followers')
11 plt.title('Box Plot: User Verified vs User Followers')
12 plt.show()
13
14 # Bar chart
15 sns.countplot(data=df, x='sentiment_level')
16 plt.title('Bar Chart: Sentiment Levels')
17 plt.show()
18
19 # Histogram
20 sns.histplot(data=df, x='user_favourites', bins=20)
21 plt.title('Histogram: User Favorites')
22 plt.show()
23
24 # Heatmap
25 heatmap_data = df[['user_followers', 'user_friends', 'user_favourites', 'compound', 'polarity', 'subjectivity']].corr()
26 sns.heatmap(heatmap_data, annot=True, cmap='coolwarm')
27 plt.title('Heatmap: Correlation Matrix')
28 plt.show()
29
```

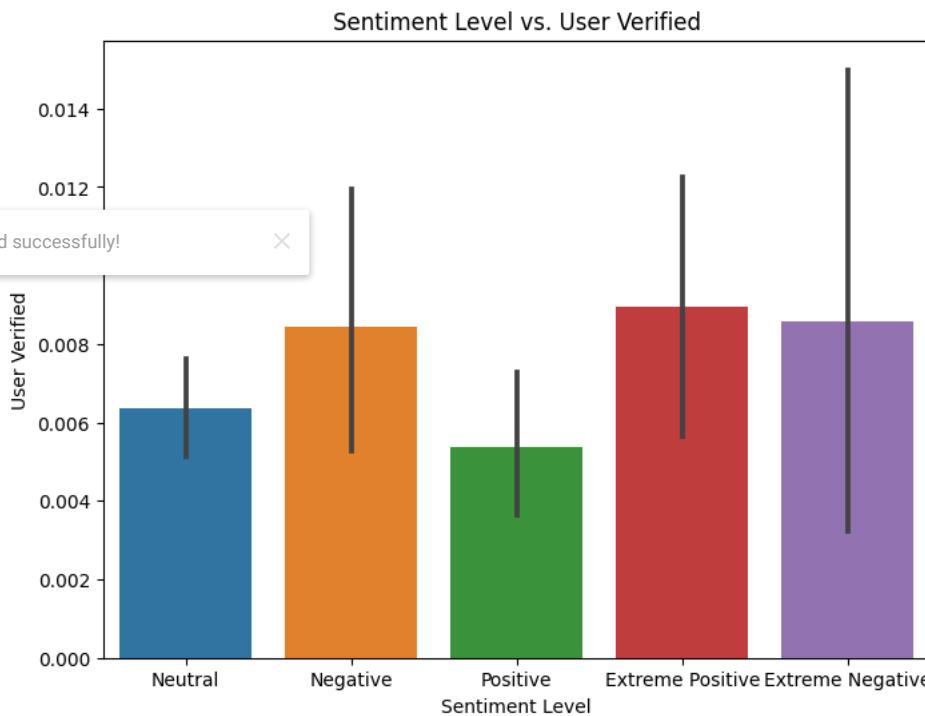
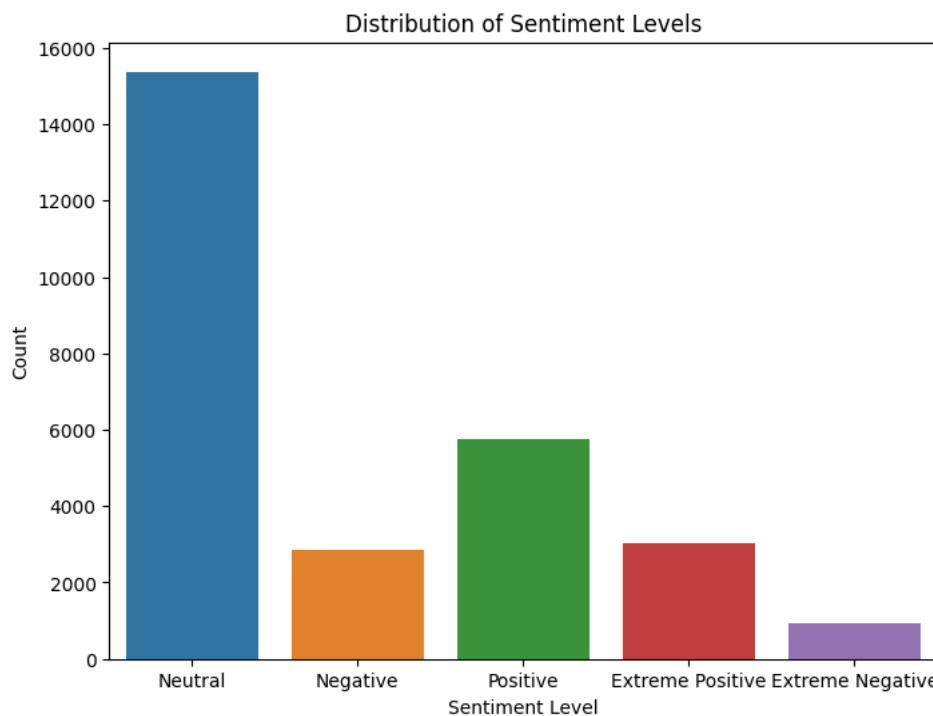
Saved successfully! ×

## Scatter Plot: User Followers vs User Friends



```
1 import pandas as pd
2 import matplotlib.pyplot as plt
3 import seaborn as sns
4
5 # Convert 'user_verified' column to numeric representation
6 df['user_verified_numeric'] = df['user_verified'].astype(int)
7
8 # EDA for sentiment_level
9
10 # Countplot of sentiment_level
11 plt.figure(figsize=(8, 6))
12 sns.countplot(x='sentiment_level', data=df)
13 plt.title('Distribution of Sentiment Levels')
14 plt.xlabel('Sentiment Level')
15 plt.ylabel('Count')
16 plt.show()
17
18 # Relationship with other attributes
19
20 # Bar plot of sentiment_level vs. user_verified
21 plt.figure(figsize=(8, 6))
22 sns.barplot(x='sentiment_level', y='user_verified_numeric', data=df)
23 plt.title('Sentiment Level vs. User Verified')
24 plt.xlabel('Sentiment Level')
25 plt.ylabel('User Verified')
26 plt.show()
27
28 # Bar plot of sentiment_level vs. user_location
29 plt.figure(figsize=(12, 6))
30 sns.countplot(x='sentiment_level', hue='user_location', data=df)
31 plt.title('Sentiment Level vs. User Location')
32 plt.xlabel('Sentiment Level')
33 plt.show()
34
35 plt.show()
36
37 # Scatter plot of sentiment_level vs. user_followers
38 plt.figure(figsize=(10, 6))
39 sns.scatterplot(x='sentiment_level', y='user_followers', data=df)
40 plt.title('Sentiment Level vs. User Followers')
41 plt.xlabel('Sentiment Level')
42 plt.ylabel('User Followers')
43 plt.show()
44
45 # Summary statistics of sentiment_level
46 sentiment_stats = df.groupby('sentiment_level').describe()['user_followers']
47 print("\nSummary Statistics of User Followers by Sentiment Level:")
48 print(sentiment_stats)
49
50 # Remove the temporary column
51 df.drop('user_verified_numeric', axis=1, inplace=True)
52
```

Saved successfully! X



```
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 159 (\x9f) missing from current font.
  fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 145 (\x91) missing from current font.
  fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 137 (\x89) missing from current font.
  fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 151 (\x97) missing from current font.
  fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 156 (\x9c) missing from current font.
  fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 157 (\x9d) missing from current font.
  fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 128 (\x80) missing from current font.
  fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 153 (\x99) missing from current font.
  fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 140 (\x8c) missing from current font.
  fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 147 (\x93) missing from current font.
  fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 135 (\x87) missing from current font.
```

```
fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 134 (\x86) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 146 (\x92) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 130 (\x82) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 158 (\x9e) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 152 (\x98) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 138 (\x8a) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 154 (\x9a) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 142 (\x8e) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 141 (\x8d) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 144 (\x90) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 149 (\x95) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 143 (\x8f) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 150 (\x96) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 136 (\x88) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 129 (\x81) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 132 (\x84) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 133 (\x85) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 155 (\x9b) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 148 (\x94) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
/usr/local/lib/python3.10/dist-packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 139 (\x8b) missing from current font.
    fig.canvas.print_figure(bytes_io, **kw)
    ... ...
    -packages/IPython/core/pylabtools.py:151: UserWarning: Glyph 131 (\x83) missing from current font.
    -s_io, **kw)
    -packages/IPython/core/pylabtools.py:151: UserWarning: Creating legend with loc="best" can be slow with 1
ed successfully!
```

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02\_BitcoinTweets\_SentimentAnalysis\_EDA.ipynb - Colaboratory



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02\_BitcoinTweets\_SentimentAnalysis\_EDA.ipynb - Colaboratory



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- Vienna, Austria
  - Naples
  - Get Started ↗
  - <https://gamma.io/marthafo...>
  - Join here ↗
  - Zug | Berlin
  - Kraków, Polska
  - Worldwide
  - Texas
  - Online
  - West Palm Beach, FL
  - The edge of the Black Hole.
  - Kuwait
  - In your thoughts ↗
  - Nebraska, USA
  - Follow + turn on notifications
  - Polska ↗
  - Miami, FL
  - #CryptoTwitter | #NFTCommunity
  - Türkiye
  - The universe and beyond
  - Decentralized
  - St. Pete
  - not a financial advice
  - BTS\_official
  - Mars ↗
  - Mymensingh, Bangladesh
  - BAT Tips accepted here
  - Western Europe
  - London/Berlin/Madrid
  - Universe
  - Global
  - localhost
  - usa
  - Intergalactic
  - διάδοχος
  - Bucharest
  - Memphis, Tennessee
  - διάδοχος
  - The Moon
  - Davy Jones' Locker
  - âžitstreet 21, Satoshistan
  - Utah, USA
  - Montana
  - Utopia
  - SyamSuria
  - The Kingdom
  - Shiraz, Iran
  - Outer Space
  - Switzerland
  - Hexico
  - Astroverse
  - here
  - Internet
  - διάδοχος India, Kerala ↗
  - Acadia
  - Maine
  - Myanmar
  - Dhaka, Bangladesh
  - Malta
  - Portugal
  - Plattsburgh, NY
  - διάδοχος, Ελλάς
  - Greece
  - Hanging around
  - London / Southwark
  - Block 745928
  - Kaspa crypto twitter
  - Dallas, TX
  - Canada διάδοχος
  - Florida, USA

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- Florida, USA
- cryptosphere
- Santa Monica, CA
- Orford, QuÃ©bec
- EspaÃ±a
- Cyberspace
- Campina, RomÃ¢nia
- Nowhere
- The moon ðð
- ovie oktavyana
- Vancouver
- Sol, Nigeria
- Not Financial Advice!
- Space Station
- The Decentralized Metaverse
- Bitcoin ð¤ð¶
- Decentralized MetaVerse
- Salzburg
- Marshalltown & Fort Dodge Iowa
- Zug/Dubai/Miami/NYC
- tÃ¼rkiye
- Seixal, Portugal
- Alaska, USA
- Durban, South Africa
- D M V
- MultiversX
- Your Crypto Community | YCC â
- Abuja Nigeria
- Karachi, Pakistan
- Austin, TX
- Nigeria
- New York, New York
- Romania
- Yanna
- Subscribe ð
- a fire in cyberspace
- Bengaluru South, India
- USA.
- Europe
- ð
- Hong Kong
- Trading
- Sunnyvale, CA
- Rockaway Beach
- Utah
- Toronto-Mississauga-Thornhill
- Astharia Anggun
- los angeles
- Earth
- world
- Midgard, Spoken: ð«ð·ð–ðððð,
- New Orleans, Louisiana
- Louisiana
- United States CA
- Angola, NY
- BROOKLYN NY 2 wherever I roam.
- worldwide
- Massachusetts, USA
- Saint-Tropez
- lolsuk.apt | loadsoflaughs.bnB
- Chihuahua, MÃ©xico
- ðð!npu1vfvakuh7hdedgd3xvqf7k
- Hamburg, Germany
- 31 Days To Profitability â
- Subscribe
- Mumbai
- San Francisco, CA
- Nomad
- Where the sun dont shine
- Tarragona

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- UK
- Block
- Louisville, KY, USA
- Australia
- New York City
- Washington, DC
- OPSEC
- Amsterdam, Netherlands
- Nevada
- Polygon
- Chicago, IL
- Mind
- Hydra
- Followback Ⓜ️
- The Web
- La Unión, El Salvador
- Queretaro, Mexico
- Ibirapuera - São Paulo- BR
- Sri Mulyani
- Vizille, France
- Blockchain, Bitcoin USA
- Raymore, MO
- Republic of Croatia
- cosmopolitan / planet earth
- hell
- BitcoinⓂ️
- Germany
- Ahmadabad City, India
- Los Angeles, California
- DeFiLand
- everywhere
- Seattle
- West Covina, CA
- Everywhere
- Florida
- GUDIVADA
- Israel
- Lusaka, Zambia
- Ovaa
- Free State of Florida
- bedroom
- Mexico
- Danmark
- Beldanga, India
- The Blockchain Ⓜ️
- Amsterdam, Nederland
- Somewhere in the Middle East
- Barcelona, Spanien
- Amsterdam, The Netherlands
- Mumbai, India
- Dubai, UAE
- www.tradingview.com/u/Daveatt
- MÄ©xico
- MS Physics
- Toronto, Oakville, Canada
- Italy
- Supply & Demand OB
- Đ£Đ°ÑĐ°ÑĐ½Đ°
- Malta Ⓜ️
- Southern Illinois
- Karma City
- Sanjauli (Shimla Urban), Shimla
- From Hell to Heaven
- The BlockChain
- worldwide
- Munich, Bavaria
- Buenos Aires, Argentina
- kolkata
- New York, USA
- Bay Area, CA

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- Springfield, IL
- Lisboa, Portugal
- Colorado, USA
- Remote
- Check it out
- t.me/investgang
- Southeast Dc
- South Africa
- New Launched Coins
- West Grove, PA
- Evreywhere
- Bitcoin Timechain
- The Blockchain
- ð¤
- Berkeley, Ca
- Imeldaime
- Leipzig, Deutschland
- Planet: Metaverse-GameFi ð¤ ð¤
- Rockies of Colorado.
- Dystopia
- Nigeria, Ukraine (Ð£ÐºÑÐ°ÑÐ½Ð°) +
- Bulgaria
- love people
- Bucaramanga, Colombia
- Ãsterreich
- 2140
- bitcoin.archive.channel@gmail
- Hotlanta
- Email: content@cryptopig.com
- The Pond
- danmark
- Astoria, Queens
- Bitcoin Citadel ð¤-ð¤-
- Malaga
- Mossel Bay, South Africa
- âunker in Fiatnam
- earth
- Down the rabbit hole
- ð¤ð¤
- Warsaw
- Boyd, TX
- Hannover, Deutschland
- 2008
- rabbit hole
- Habiganj, Bangladesh
- On Retest
- Earth
- Citizenship is in the Heavens
- Toledo, OH
- Localhost
- Bengaluru
- 3.1569° N, 101.7123° E
- Ontario
- Charlotte, NC
- Cleveland, GA
- el mundo
- Mountain Cave
- Nashville, TN
- Harmonstown
- metaverse, Europe
- Treaty 6 Territory
- Orlando
- Shrewsbury, England
- Earth ð¤
- Estados Unidos
- cÆVinka
- Rabbit Cave
- A Pale Blue Dot
- Romeð¤®ð¤¹ / Japanð¤-ð¤

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- Greensboro, NC
- Venezuela
- seoul. kangnam
- Washington DC
- ð airdrops for grabs âï¸
- Pretoria, South Africa
- Matrix
- Republic of Serbia
- Catalonia, Spain
- Germany / Canada
- Orlando, FL
- Buitenzorg, Indonesia
- Columbus, OH
- Salt Lake City, UT
- Iran, Mariwann
- Bay Area
- sevilla
- Bitcoin.org
- Girona
- Suffolk, England
- mempool
- Globally
- North Rhine-Westphalia, German
- Untraceable
- The Moon!
- Cyber Space
- Antarctica
- olympus mons
- Turn notifications on!
- Costa Rica
- Lahore, Pakistan
- Quarantine
- IXHUATAN
- Bengaluru (India), Germany
- Decentralised
- The world
- Hopium Resorts
- Bitcoin Blockchain
- Mass NON-COMPLIANCEð
- Los Angeles, Ca
- Jaipur, India
- Detroit, MI
- NFA
- Place with lots of LOVE &FUN
- China
- Fight Club
- Ontario canada
- The Roof
- Earth ð
- NFT, Metaverse ,We love U all
- Barcelona Spain
- Oslo, Norway
- Gunzenhausen
- Indonesia
- Qatar
- Wandering the Cryptospace.
- Metaverse, We love you all !
- From World's Largest Democracy
- JasmyCoin
- Ballito, South Africa
- Black Mesa (BM=BTC Mines)
- IG Farben
- Bull
- Aiming for one \$ Billion AUM
- Near the Beach
- The Right Side of the planet!
- In your thalamus
- I Uber in SLC & Park City, UT
- Houston, TX
- âabylon

Saved successfully! ×

Saved successfully!

- Greenwich, CT
- Ireland
- @patricia\_patsu
- Nairobi, Kenya
- Not financial advice
- NYC
- Scotland, United Kingdom
- Iowa, USA
- DM my Telegram @coachwong &
- Inside a wine barrel
- Alipurduar, India
- Investor & A Business Student
- heaven ☰«£ fun & parody ☰¤-cox£
- @FreddyHere
- Derby, England
- The Fourth Turning
- venezuela
- Omniversea
- On the moon
- Southampton, England
- Long Island New York
- Under your bed
- Bronx, NY
- Taiwan
- Slovakia
- mop: gcash, crypto, load
- Mars ☰¤.□
- Offenbach am Main
- Berlin, Deutschland
- North Carolina, USA
- Web3
- ☰¤¤ Earth ☰¤¤
- Entrepreneur
- Iraq
- Naguru upperhill
- City of London, London
- Jharsuguda , India
- Brasil - Portugal
- The Netherlands
- Deep inside the ☰¤¤δ¤¤¤.□
- Abuja, Nigeria
- Bahrain
- Communist Canada
- Goblintown
- Paris, France, Earth
- Cryptoverse
- Decentraland
- Tampere, Finland
- Malibu, CA
- Garland, TX
- poland
- ☰¤¤©δ¤¤¤ â¤¤ ☰¤¤
- Kansas, USA
- CANADA
- Cryptoworldδ¤¤
- Pittsburgh, PA
- Denver, CO
- ☰¤¤BTC Recruiting Services ☰¤¤
- Pennsylvania
- Andorra la Vella, Andorra
- KarabaÄ±lar Mahallesi, Ä°zmir
- Arizona
- Roblox
- 49.898176,10.334702
- Craftworld
- Hameln, Deutschland
- The Tropics
- 63 Panchos Way
- HÃ NÃ¡»i , ViÃ¡»t Nam
- Malaysia

Saved successfully! ×

- Market
- unknown
- Somewhere in Africa
- Bangalore
- Dubai United Arab Emirates
- Naomi
- Burnaby, British Columbia
- Brooklyn, NY
- Houthalen-Helchteren, Belgium
- Domain Whaled 3Digits
- ä,-å,ääæ°å±åå½æ·å·
- Altavilla Vicentina, Veneto
- Baffin Bay
- Iagos
- Bitcoin
- korea, è»µé»µé»µé»µ
- United States of Jalna, India
- Buzz City
- Cryptocurrency
- The Otherside
- Balikesir, Turkey
- Buenos Aires ARGENTINA
- Marne, Germany
- Valais, Switzerland
- Max Prestige
- Otta, Nigeria
- Enchanted Metaworld å“zt3aw.wam
- Seoul, South Korea
- United
- Uzbekistan
- Seoul 旳°旳/ Bangkok 旳°旳-
- Frangokastello
- Lakeland, FL
- your brainwave
- Sintra, Portugal
- Maryland
- Frankfurt, Germany
- Behind you! 旳°旳,旳
- Lebanon
- Chicago burbs
- Moorhead, MN
- Orange Coin
- Northern Hemisphere
- Turkey
- Montréal, Québec
- Journey to 20k Friends
- Bitcoin Citadel
- Venekistan
- 13th Dimension
- West Virginia, USA
- Illinois, USA
- Finland
- Marion, IA
- CHATTOGRAM , BANGLADESH
- EN MI CASA
- Ampenan
- Ann Arbor, MI
- Atlanta, Georgia
- Pali Rajasthan (India)
- Moldova
- Underground
- Winston - Salem State
- Russia
- 旳°旳,
- Sumatra
- Sydney, Australia.
- Berlin
- é»µí»µé»µé»µ-ì»µì», Korea
- Ø
- Pussay, France

Saved successfully! ×

- Colorado
- Casablanca
- Moon.
- JOHANNESBURG ( RSA )
- Join 1000+ subscribers ☺
- State College, PA
- Ira Deviyanti Septianingsih
- Overland
- Spaceship to Moon
- South of heaven
- Batangas City, Calabarzon
- Spirit Of Java
- Scarce City
- Nostr Address:
- Tallinn, Estonia
- Hamburg, Deutschland
- Genesis Block
- tor
- New England
- New Hampshire
- Miami, FL
- Jorhat, India
- DLT & ILP, Not Really
- Bucharest, Romania
- Alonzo
- Subscribeð
- Your Mom's house ☺
- Pittsburgh, Pennsylvania
- india
- Mongolia
- Future
- Perth, Australia
- CuraÃ§ao
- Viet Nam
- \$MOON
- Reno, NV
- Bethlehem
- Eindhoven
- michelle qissi
- NEXO PRO Margin Trading
- Midwest USA
- Marcia
- Traveling
- United State
- Join our telegram channel ☺
- Cleveland, OH
- Shenzhen, China
- Innsbruck, Ã¶sterreich
- New Jersey, USA
- nostr:lukedca@noderunners.org
- zBTNshK436
- Wyoming, USA
- No Financial Advices
- Crypto Space
- Active GAsâ€œiï¸ 
- Philadelphia, PA
- Kampala, Uganda
- QuerÃ©taro, QuerÃ©taro Arteaga
- third rock from the sun
- 40 Bank Street. Canary Wharf.
- Bristol, England
- All over the globe
- Somewhere in Asia
- Swindon, England
- AMERICA
- ZÃ¼rich, Schweiz
- Free Market @ Internet Economy
- JOIN FREE TELEGRAM GROUP
- Doctors Office in Metaverse
- humanforever.us

Saved successfully! ×

Saved successfully!

Saved successfully!

- in the Clouds የሸያንጻ
- @DyanRidwann
- United States of America, CA
- Queens, New York
- Ohio State University Alumna
- Crypto Market
- Gamerland
- Whole WORLD
- Richmond, Va
- GambleVille
- LINDA YULIANDARI
- Currently hiding in Spain
- Not your jurisdiction (sorry).
- Stati Uniti
- Jkt indonesia
- Seoul
- Laos
- kortenberg.eth
- LunaClassicHQ
- Teegarden's Star b
- North Bergen, NJ
- The Cloud
- Federal Capital Territory, Nig
- Gurgaon, India
- NYC, δὲ-δὲ-μ, δὲ-μ
- pabna
- INDONESIA
- Vicenza
- Brazil δὲ-δὲ-μ
- Perth, Western Australia
- The Internet
- Victoria BC
- https://iris.to/ronin
- paris, France
- Bitcoin city
- calidax.eth
- the moon
- Elon Muskâs Basement
- karachi
- Midnapore, India
- δὲ-δὲ-μδὲ-δὲ-μδὲ-δὲ-μδὲ-δὲ-μ
- where my leg carry me go
- Scotland
- δὲ-δὲ-μ.
- U.S.A.
- Bhutan
- Crypto, DeFi & Metaverse
- Earth is the safest place
- in the cut
- Mustfaabad Kasur
- @home
- Shasa SitiShaiya
- IAU
- Termini Imerese
- San Diego
- Providence, RI
- BITCOIN CITY, NEW BITCOIN
- Accra
- Doesnât exist
- www.MarketingMasterminds.org
- at the top of the charts
- Exeter
- Oklahoma, USA
- Berrinba, Brisbane
- Made by Humans on Earth.
- The Mines
- Probolinggo
- reddatos.com δὲ-μ
- Gibraltar, MI
- Woodbridge, VA

Saved successfully! ×

- Always DYOR !!!
- Georgia, Tbilisi
- SPACE
- Inglewood, CA
- Metaverese
- Assam, India
- Tech
- Citadels
- Earn Bitcoin for shopping
- ðµð;
- web3
- Yogyakarta, Indonesia
- Corner of S&P500 and Nasdaq
- Shanghai
- Locust Grove, GA, US, 30248
- Roma, Lazio
- Arin Djunaidi ïë!
- Argentina
- Join FREE Discord ð
- Haarlem, Netherlands
- EARTH
- Los Altos
- Adana, TÃ¼rkiye
- united States
- NFTð
- Sunny south Florida
- Iceland
- Libertalia
- Sorong
- Global Online
- NFT Community
- I'll follow you back
- cyprus
- @goopdoods
- all
- AntÃrtida
- Take Advantage of my Servicesâ¬
- weltweit
- Middle East
- Block Height 840,000
- The Great Depression
- Manila
- St Louis, MO
- Miami Beach, FL
- UDverse
- Mcdonough, GA
- Christendom
- The Lagoon
- Copacabana, Rio de Janeiro
- St. Louis, MO
- info@cryptopium.com
- Moonzie, Scotland
- Tulsa, OK & Sacramento, CA
- The Islands
- Open & Decentralized Metaverse
- Definately Maybe New Jersey..
- Colorado, US & United Kingdom
- MÃ©rignac, France
- BlockchainCity
- Porto
- Plymouth Colony, Massachusetts
- Poznañ, Polska
- Ordinals
- Community
- In the profit
- Binance Smart Chain
- Bengaluru, India
- United Starts
- Earth (currently)
- â;

Saved successfully! X

Saved successfully!

- Εύβοια Αγρίδια, Greece
- The United States of America
- Viá»»t Nam
- Kabul, Afghanistan
- Jaipur
- WEB3
- Lord Krishna's Heart âœ,âœ
- Vancouver, British Columbia
- The Hard Right Edge
- Between South Asia and Europe
- Oslo
- Mile
- Bulawayo, Zimbabwe
- Boca Raton, FL
- Banana Island
- Brazil
- The Crypto Block
- all over the metaverse
- USA/TH
- Republic of Slovenia
- Mr. SATOSHI AMBASADOR
- with the plebs
- Between north and south
- DMs open for business
- Shibuya, Japan
- GREECE
- Prayge KEKistan
- Seoul, Republic of Korea
- Wales, UK
- Ontario, CA
- Beach
- Twice weekly content δÏŒδÏŒδÏŒδÏŒδÏŒ
- On the way to Moon
- Tweets are not Financialadvice
- METAVERSE
- The Empire
- Tokyo
- Ethereum
- North East England
- Surat, India
- Uyo
- www.pool.creamcoin.com
- Berry Islands, Bahamas
- Space
- Toscana, Italia
- Baden-WÃ¼rttemberg
- Web 3.0
- israel
- Frankfurt am Main, Deutschland
- Gibraltar & KrakÃ³w
- Hokkaido, Japan
- Milky Way Galaxy
- Cardiff, Wales
- Citadel
- Born to âœ Free
- Bayern
- Egypt Lake-Leto, FL
- Somewhere in Laniakea Cluster
- Bitcoin δÏŒδÏŒδÏŒδÏŒδÏŒ
- Dubai mall sayed jehad road
- Between Vilnius and Paris
- TheRuggables
- Saint-Malo, France
- Get free bet & casino bonus at
- NFT
- Bulls Vs Bears Land, UK
- Medan
- Newcastle, Australia
- Sydney
- CompiÃ©gne, France
- Lahore Pakistan

Saved successfully! ×



Saved successfully!

- [Lucerne]
- [Radix]
- [metaverse, Nigeria]
- [Yggdrasil]
- [Allover]
- [AQUILAND]
- [Arnhem, Nederland]
- [Uganda]
- [Villain City]
- [on TPs]
- [Yola, Nigeria]
- [MC Capital Ventures]
- [Portsmouth]
- [Minato Metaverse]
- [Colombia]
- [Butcher Paper]
- [Kota, Rajasthan]
- [Dubia UAE]
- [Check now!]
- [Palma, Spain]
- [Samurai Land]
- [Ponorogo, Indonesia]
- [Canada / Norway / Australia /]
- [Telegram @tokensfund]
- [Budapest, Magyarország]
- [Decentralized Planet]
- [Official YT Channel ດ້ວຍເຫັນ, ລາວ]
- [Cypherspace]
- [ZERO FEES Trading! ດ້ວຍເຫັນ]
- [Tamilnadu, india]
- [Galati]
- [Rajasthan, India]
- [krishna]
- [Loxton, South Australia]
- [Netherland]
- [Target Moon]
- [Cryptoworld]
- [Bavaria Germany]
- [Italia]
- [Camden Town, London]
- [Ferndale]
- [5JGL Brno-South, Czechia, 6170]
- [Calgary, Alberta]
- [Sydney, Australia]
- [United states]
- [BNB Chain, Binance Smart Chain]
- [Nashville, TN, USA]
- [Ukraine]
- [â€œâ€œ®¤]
- [Abidjan, Paris]
- [In the cloudsâ€œâ€œ, â€œâ€œ, ]
- [Peshawar, Pakistan]
- [Depok]
- [Cafayate, Argentina]
- [California, Scotland]
- [Blockchain]
- [Suisse]
- [Guthrie Castle, Scotland, UK]
- [Madrid, Comunidad de Madrid]
- [DK]
- [Middle Earth]
- [nia minoz]
- [Ogun, Nigeria]
- [Italiaðœðœ®ðœðœ<sup>1</sup>]
- [Equatorial Guinea]
- [Mayfair & France]
- [Dolarhane]
- [Nordrhein-Westfalen]
- [MNW Auto Trader]
- [Royaume du Maroc]

Saved successfully! ×

- GURGAON, INDIA
- Otherside CA
- Kota Bandung, Jawa Barat
- ð;ð
- Dagobah, Outer Rim
- AI TRADING BOT
- Somewhere
- The Moon obvs
- SPOT
- Entering, Valhalla
- Planet ð
- #blockchain
- On Chain
- Frankfurt am Main
- Beverly Hills, CA
- glorious northyorks
- ðWeb 3.0
- çåã,
- Caldes de Montbui
- Climbing a mountain.
- Belgrade, Republic of Serbia
- san jose
- Philippines
- Crypto world
- FOR MORE ð
- Blockchain Everywhere
- Swellendam, South Africa
- Greece - Ukraine
- The Orange Pill Book
- Band Trading IDE
- Wielka Brytania
- TÃ¼rkiye-Amasya
- Lagos, Nigeria
- dexgameevreni
- Newfoundland and Labrador, Can
- Anywhere BTC Accepted
- Blitar - Indonesia
- Defi Index - Insights - Info
- Anonymous
- Blue Mountains, NSW
- blockchain
- Chandigarh, India
- Darfo Boario Terme, Lombardia
- ð@ð©ðð, ð~ðð, ðððð, ð»ð©ððð·
- Mars - Ø§ÙÙØ±ÙÙØ®
- New York
- Czech republic
- New Orleans, LA
- Subulussalam - Indonesia
- Relai Refcode SWISSTOKEN
- Bangkok (Thailand)
- Sol System
- America
- #Protectcapital ! #Retailarmy
- Michigan
- Curacao E-Zone
- Milano, Lombardia
- Kuusalu vald, Pudisoo kÃ¼la, MÃ¤nnimÃ¤e, 74626, Estonia
- in profits
- Cryptocurrency ðð°
- PLR
- Ankara
- Las Vegas
- Plochingen
- Redneck forest
- ð~ðð~ð!Planet #Earth, mostly
- never mind
- Copenhagen
- #Metaverse
- Anguilla

Saved successfully!



- not financial advice.
- Luxemburg
- San Juan, Puerto Rico, USA
- Moon, PA
- Luxembourg City
- Ghana
- Country
- La Canada Flintridge, CA
- ð Always DYOR
- Tampa Bay, Florida, USA
- I try not to be a hypocrite
- Anywhere but the Matrix
- Kingston Falls
- Madurai, TamilNadu
- Daddy Island
- Orbis Tertius
- ZÃ¼rich
- Bitcoin Blockchain Block 1
- Pune (India)
- Calabar, CR, Nigeria
- Ù¾Ø§Ù©Ø³Ø³Ø§Ù
- Gods own city
- Marbella
- Pennsylvania, USA
- Utrecht
- Lucknow, India
- instagram:1571casin0
- Berlin, Germany
- Berlin, London, New York
- Dominica
- Anggun Lestari UAK
- Bitcoin Heaven
- Uyo Nigerian
- 1990s INTERNET is CRYPTO NOW
- Slovenia
- BSC
- Tasmania, Australia
- Everywhere and No Where
- Bitcoin World
- Heidelberg, Germany
- Somewhere in Matrix
- Gujarat India.
- International Space Station ð
- HongKong
- limbo
- Fife, Scotland.
- Silicon Valley, California,
- âlieuâ
- Crypto
- Tanzania
- Colorado Springs, CO
- Minneapolis, MN
- Mempool
- Winterthur, Switzerland
- Kentucky
- ðð
- 32000
- Indore, India
- Land of the Free
- Buy low, sell high
- A small blue dot in space
- Twetch @63757
- silviani
- kuwait
- ðð
- GigaMegaTurboStonks
- The Metaverse
- New-York
- Goa, India
- london, kensington

Saved successfully! X

- #BSC
- Amman, Jordan
- Dark side of Mars
- The Ludus
- Loggia Nera
- Melbourne
- Travelling the world 🌎
- Blockveins
- Pune, India
- Panama City, FL
- houston
- Middelburg, South Africa
- Bandung
- Your Mums Pants, your house.
- 🌐
- In your MIND 🌐
- \$LINK Island
- Canada / El Salvador
- 🌐`🌐%
- Crypto Land
- Andromeda
- Turn on the notification.
- Oklahoma
- U.K.
- PAPUA NEW GUINEA
- Tampa Bay, FL
- Sakrand, Pakistan
- Austria
- Cambodia
- Altänder, Türkiye
- Bound in Room
- Kings Hill, South East
- Indiana
- Lubuk Linggau
- Taichung, Taiwan
- Punjab, Pakistan
- usa,boston
- Southern Africa
- Cairo ,Egypt
- CryptoSpace
- Belgium 🇧🇪
- Long Jetty, Central Coast
- Satsville, Bitcoinshire.
- Sutton Place
- Festival Arena
- Xibalba
- Worldwide!!!!
- Kadena\_Network
- Egypt
- 9th Floor, Ebene Tower,
- 52 Cybercity Ebene,  
Republic of Mauritius
- Kigali
- Oregon, USA
- MARS.
- Brahmanbaria, Nabinagar-(3400)
- Nederland, TX
- Sant'Ana do Livramento, Brasil
- New South Wales, Australia
- McDonald's
- Nairobi city
- Delaware
- Hosenland
- The Crypto Verse
- Marshall Islands
- République du Bénin
- Fontana, Calif
- Kekistan
- To the Moon
- Birmingham United Kingdom

Saved successfully! ×

simulator 0\_0  
 Birbhum WEST BENGAL INDIA  
 Between Metaverse & Earth  
 δ\_0\_0  
 m/84'/0'/0'/0/0  
 Claimδ\_0\_0 Voucher 100USDT  
 Āoge  
 Mint Island  
 Kolkata, India  
 7 moves ahead.  
 Worlwide  
 Coronado, CA  
 Virginia, USA  
 Redwood City, California  
 Sky  
 Metaverse δ\_0\_0  
 Ontario, Canada δ\_0\_0 δ\_0\_0  
 Digital  
 Running Springs  
 The Antares Star System  
 Pleadies  
 Orland Park, IL  
 UTXO  
 Palermo, Sicily  
 Hafizabad, Pakistan  
 Capric-Anna.nft  
 Turn the δ\_0\_0 NOTIFICATIONS ON  
 in the pines  
 Crypto Twitter  
 Somewhere in the MetaVerse  
 Austin TX  
 The Promised Land  
 Grovetown, GA  
 Crypto | Forex | Stocks  
 Toronto, Canada  
 internet  
 CRYPTO WOLD  
 Montrâal, Canada  
 δ\_0\_0;δ\_0\_0δ\_0\_0PfknRδ\_0\_0δ\_0\_0δ\_0\_0δ\_0\_0  
 Somewhere on Earth  
 Maryland, US  
 Kolkata  
 Maui, Hawaii  
 California  
 DKI Jakarta, Indonesia  
 Jericoacoara - CE  
 Spirit Realm  
 Spokane - Coeur D Alene  
 Bonke world  
 EL SALVADOR  
 Nashville  
 Vientiane, Laos / Canada  
 Republic of the Philippines  
 Minnesota  
 21M Block 0101010101010101010101  
 Orange County  
 Gold Coast ,Australia  
 Rossland, British Columbia  
 Kenya, Uganda  
 Temecula, CA  
 Security beyond cold storage.  
 TWITTER ALPHA  
 AnyGalaxy  
 Detroit  
 Delhi  
 Bethlehem, PA  
 Denpasar, Bali  
 Canada â\_0\_0 China  
 Britain  
 Laren, Netherlands  
 Brno, Czech Republic

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- █ Prague, Czech Republic
- █ Cork, Ireland
- █ The Metaverse and Web3
- █ Bavaria, Germany
- █ pakiatan
- █ Always Traveling
- █ Off-world
- █ da blockchains & wassieverse
- █ Mafia Secret Room
- █ âžitcoin Ätitadel
- █ Singapore, US and Hong Kong
- █ unusual whales
- █ On my bed
- █ Alger
- █ 3100 E Charleston Las Vegas NV
- █ National Capital Region, Repub
- █ Join our Discord ☁
- █ Location
- █ Sylvester, GA
- █ Klaten Selatan, Indonesia
- █ All Over The World
- █ 旳旳旳旳, 旳旳'旳旳'旳旳'旳旳·旳旳旳旳
- █ Maki's Izakaya - Land of Wano
- █ New York City / Jersey City
- █ Virginia
- █ Inscribed on Bitcoin
- █ The Lone Star State
- █ Sydney, New South Wales
- █ International
- █ Cash is Trash
- █ Analog, Digital, Space
- █ Hey! ☁
- █ \$BITCOIN
- █ ☁ Review Bitcoin Products
- █ Get Binance
- █ Naples, Williamstown, Anghiari
- █ Magelang, Jawa Tengah
- █ Orion-Cygnus Arm
- █ Alternate Universe #KX6M8
- █ Chiyoda-ku, Tokyo
- █ Ceiliter of the world
- █ Wall Street
- █ Melbourne, FL
- █ Latinoamérica
- █ Winnipeg
- █ Vermont
- █ Wyoming, USA, Thayne
- █ Bitcoin Magazine®
- █ 旳旳旳旳;
- █ My mom's house
- █ Sunyani
- █ This account is not monitored
- █ https://www.btcteacher.com
- █ 21 Bitcoin Avenue, Mars
- █ Gold Coast, Australia
- █ Tel Aviv, Israel
- █ Kansas
- █ Algodão
- █ Santiago, Chile
- █ San Antonio Cañada, Puebla
- █ Fairfield Township Ohio
- █ Lowell, MA
- █ Casino Royale
- █ Alberta, Canada
- █ Worldwide
- █ Land of Satoshi
- █ St. John's
- █ San Diego, CA. 92109
- █ Sioux Falls, SD
- █ Kullu and Manali, India

Saved successfully! ×

Saved successfully!

- Babylon PureBlood HQ
- Www.PulseChain.com
- Naples, FL
- Tallahassee, FL
- Crypto Casino
- Toronto, Ontario トロント
- Elysium
- El Salvador エルサルバドル
- スイス- Switzerland
- Canada カナダ
- Platform #10
- Crypto Gotham
- Cumaná, Venezuela
- San Salvador, El Salvador
- Seongapdo
- Trading Crypto
- Connecticut, USA
- DXB
- Ardmore, Ok
- Bitcoin ビットコイン hole
- アーヴィング
- Conover, NC
- 212
- Italy Milan
- Rome, Lazio
- Nuevo Cuscatlán, El Salvador
- DeFi
- Mercedes, Argentina
- Nomade
- Hà Nội Cholon, Vietnam, Việt Nam
- MNL
- Ocean
- Amherst, MA
- Panama City, Panama
- Jurassic World
- AKS, Uyo トーキョー
- The Law of Time
- Portsmouth, VA
- Hyperbitconized Universe
- Essex
- Turn notifications on ビットコイン
- Japan
- a bitcoin node, Oregon
- Darwin, Northern Territory
- Tamil Nadu, India
- Rooftop
- Cognac, Wisconsin USA
- パリ XVI
- MARS
- Inside the Omnitrix
- BlocksLands
- Under a Tree
- Lambo Dealer
- PyraWeb1618@gmail.com
- ビットコイン
- On a cloud above you
- Jini
- Join telegram Channel ビットコイン
- In the open sea
- astrocryptoreport@gmail.com
- ビットコイン WORLD WIDE
- Tycho Crater - What a view!
- Poland - Warsaw
- #TCGWorld
- UTC +1
- Not an analyst. DYOR. NFAs
- Follow me, I will follow you!
- 52.979655,-2.131093
- U.S.A
- Dublin Ireland & London UK

Saved successfully! ×

02\_BitcoinTweets\_SentimentAnalysis\_EDA.ipynb - Colaboratory

Saved successfully!

- Chart
- Vijayapura, India
- Patna, India
- dromokaiteion
- Eastern Europe
- Ile-de-France, France
- Manchester, England
- BlockChain
- France.
- cyberworld
- Ellijay, Ga
- vivianfelisia
- ready for bullrun
- SG
- Midwest
- Jupiter
- J. Cash "I've Been Everywhere"
- Ereğli, Târkiye
- In Your Ȑ, Ȑ
- ðThe Spirit Worldð
- the sun
- â¤
- Boynton Beach, FL
- mTrading
- Asia
- Around the World
- Sialkot, Pakistan
- Luna
- Czech Republic
- united states
- Arden-Arcade, CA
- REKT BY FTX
- Sylhet, Bangladesh
- Energy, IL
- Tha Moon ð
- Crypto space
- THE Peaceful World
- citra
- Argha Abishalom
- Puruliya, India
- blockchainstate
- Akwa Ibom, Nigeria
- 661
- Peachtree City, GA
- Your Home
- Ciudad Obregon, SON, MEX
- ÙÙÙØ·Ø·ÙÙÙ
- PulseChain.com | PulseX.com
- Hilmanie Ramadhan
- Dm for Promotion
- India, Kuwait
- Albury, New South Wales
- Eka Fiony S
- iran
- Tonga
- Currently planet Earth.
- to the moon
- DYOR: Not Financial Advice
- Bosnia and Herzegovina
- Birmingham, UK
- Inside
- McKinney, TX
- Vegas, Costa Rica, Columbia...
- Bath, England
- MÃ¼nchen, Bayern
- Oslo,Norway
- NY
- Ästanbul/Bodrum
- Tomorrow
- BTC NFT world

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- Gaia
- Tatooy Ape Metaverse
- Discord
- Trebnje
- Eger, Magyarország
- Nodia, India
- Putri Arie Utama
- İstanbul/ TURKEY
- on the tweets
- uae
- The Moon, specifically your mo
- Narragansett, RI
- Xenia, Narnia District
- Pixlverse
- Terra Mater
- United Nations
- গুৱাহাটী
- Chittagong, Bangladesh
- Spacetime Pond
- Saint Petersburg FL
- Islamic Republic of Iran
- Mudanya, Türkiye
- Barcelona, España
- Immutably On The Chain
- Corpus Christi, TX
- ANKARA / TURKEY
- Blockchain.
- গুৱাহাটী গুৱাহাটী- গুৱাহাটী-
- Montreal
- bsc
- Everywhere গুৱাহাটী
- গুৱাহাটী
- NYC USA
- Oasis MetaVerse
- stake
- Aligarh, India
- গুৱাহাটী
- Peace city
- Egghead
- Milky Way গুৱাহাটী
- Stuttgart, Deutschland
- St Petersburg, FL
- Earth 2.0 Andromeda Galaxy
- /triest/ /Enghewéen/
- Singaporeগুৱাহাটী
- Montreal নিয়ে Hong Kong নিয়ে Shanghai
- গুৱাহাটী; গুৱাহাটী>গুৱাহাটী
- No financial advice
- Orbiting in Digital And Space
- Bogor, Jawa Barat
- Abbeville, LA
- Koreaboo
- Canary Fox
- Oau
- Abundance AVEগুৱাহাটী
- St louis
- Hungary
- BronxRaised/SelfMade/BK Stayin
- NomadX
- Columbia, KY
- Dietlikon, Schweiz
- Rome, Italy
- Norwich, England
- tasyaa!
- Not @Yale
- homeless
- A bar near u
- ARGENTINO E ITALIANO
- Blue Earth, MN
- pakistan

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02\_BitcoinTweets\_SentimentAnalysis\_EDA.ipynb - Colaboratory



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- Uyo, Nigeria
- Brussels, Belgium
- Drummondville, QuÃ©bec
- #ÙØ-ØÙØ, ØØ\_ØÙØØ-ØØ
- Estadio Santiago BernabÃ©u
- South America
- Sofia, Bulgaria
- On the West Coast
- BlockchAIn
- Boston
- #sushi #axs #algo #one #uni
- Mykonos, Greece
- <https://t.me/CryptoJumpStarter>
- Turks and Caicos
- Nirvana G
- ØØØØ
- àØ²àØØàØ~àØØ, àØ-àØ³àØØàØØ
- Nokia 3310
- Kalimantan Barat, Indonesia
- Vietnam
- Bornheim, Deutschland
- Belo Horizonte, Brasil
- Angleterre, Royaume-Uni
- IndiaØØ®ØØ³
- Surat,Gujarat
- Algeria
- Somewhere in Space
- FX/Crypto
- Hollywood, Los Angeles
- Chihuahua is the top dog
- Usually on my couch
- AustraliaØØ;ØØºØØ;ØØº
- Stedman, NC
- Cape Coral, FL
- Btc 6400-Eth349
- POLAND
- Claim Airdrop NowØØ¥ØØØØ
- Mississippi
- [www.MyFrugalBusiness.com](http://www.MyFrugalBusiness.com)
- London Colney, East
- newyork
- Iran
- [t.me/TheDailyCryptoLaunchpad](https://t.me/TheDailyCryptoLaunchpad)
- Nashville, Tennessee
- Analyzing ØØØØ
- Rio de Janeiro, Brasil
- Multi-chain
- On Blockchain
- ØØØØ,Ø
- bangladesh
- Rajshahi, Dhaka,Bangladesh
- FRANCE
- Wakanda
- MOROCCO
- Tasikmalaya
- liquidity
- United States of America
- Cape Breton Island, NS
- Salt Lake City, Utah
- Togo
- PrayagRaj
- keep it simple àØ¿
- Curacao
- Gh.Tema
- Dallas, TX USA
- TO.LV.MOON
- Jawa Tengah, Indonesia
- SPAIN
- ØØØØ Earth
- Down Under

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