

Twitter Challenge

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Trending Hashtags in Worldwide:

- #ไม่ไหวบวกแบรนด์: 0
- #モニタリング: 39957
- #9ent2023xfreenbecky: 394264
- #nhk_life: 20628
- #素のまんま: 19329

Constructor Learning Group Data Challenge: May 25, 2023

What can we learn from Twitter? (according to chatGPT)

- Real-time sentiment analysis for brands and businesses.
- Social media monitoring for reputation management.
- Trend analysis and identification for market research.
- Personalized content recommendation based on user preferences.
- Customer support and engagement through direct messaging.
- Influencer identification and partnership for brand collaborations.
- Social listening for public opinion and sentiment analysis.
- Event tracking and live updates for conferences and gatherings.
- Hashtag tracking and analysis for campaign performance.
- Data-driven decision making for social media strategies.

The challenge

- Use the Twitter API to access Twitter data.
- Find the most frequently used hashtags.
- Choose 5 famous American celebrities, analyze their twitter usage (e.g. number of tweets, retweets, when tweet during the day, etc.) and compare the results to Elon Musk's Twitter account.

Use the Twitter API to access Twitter data

- SNscrape (open source; blocked)
- tweepy (requires authentication)
- twython (requires authentication)

Find the most frequently used hashtags

- Find the most frequently used hashtags.

```
auth = tweepy.OAuthHandler(consumer_key, consumer_secret)
auth.set_access_token(access_token, access_token_secret)

# Create API object
api = tweepy.API(auth)

# Define the WOEID values and region keys
regions = {
    "Worldwide": 1,
    "United States": 23424977,
    "United Kingdom": 23424975,
    "Canada": 23424775,
    "Australia": 23424748,
    "India": 23424848,
    "Switzerland": 783058,
    "Germany": 638242
}

# Retrieve the top trending hashtags for each region
for region, woeid in regions.items():
    # Retrieve the trending topics for the specified location
    trends = api.get_place_trends(id=woeid)

    print(f"Trending Hashtags in {region}:")
    for trend in trends[0]["trends"]:
        if trend["name"].startswith("#"):
            hashtag = trend["name"]
            tweet_volume = trend.get("tweet_volume", 0) or 0
            print(f"{hashtag}: {tweet_volume}")

    print()
```

Choose 5 famous American celebrities...compare the results to Elon Musk...

- Please see our streamlit app at the following url:
- <https://rluech-twitter-streamlit-srcoriginal-waug02.streamlit.app/>

```
# Create API object
api = tweepy.API(auth)

# Prompt the user to enter the Twitter username
username = input("Enter the Twitter username: ")

# Prompt the user to enter the maximum number of tweets
max_tweets = int(input("Enter the maximum number of tweets to retrieve":"))

# Fetch the user's information
user = api.get_user(screen_name=username)

# Fetch the user's tweet history
tweets = tweepy.Cursor(api.user_timeline, screen_name=username, tweet_mode="extended").items(max_tweets)

# Initialize a list to store the extracted tweet data
tweet_data = []

for tweet in tweets:
    # Extract basic tweet information
    try:
        url = tweet._json['entities']['urls'][0]['url']
    except:
        url=''
    tweet_info = {
        "created_at": tweet.created_at,
        "text": tweet.full_text,
        "retweet_count": tweet.retweet_count,
        "favorite_count": tweet.favorite_count,
        "hashtags": [hashtag["text"] for hashtag in tweet.entities["hashtags"]],
        "mentions": [mention["screen_name"] for mention in tweet.entities["user_mentions"]],
        'source-url': tweet.source_url,
        'url': url
    }

    # Extract geolocation if available
    if tweet.place is not None and tweet.place.bounding_box is not None:
        coordinates = tweet.place.bounding_box.coordinates[0]
        latitude = (coordinates[0][1] + coordinates[2][1]) / 2
        longitude = (coordinates[0][0] + coordinates[2][0]) / 2
        tweet_info["latitude"] = latitude
        tweet_info["longitude"] = longitude

    # Append tweet data to the list
    tweet_data.append(tweet_info)
```