**Social Media Sentiment analysis**

Intro:

* Sentiment analysis is a text analysis method that detects polarity (e.g. positive or negative opinion) within text, whether a whole document, paragraph, sentence, or clause.
* Understanding people’s emotions is essential for businesses since customers are able to express their thoughts and feelings more openly than ever before.
* Sentiment analysis models focus on polarity (positive, negative, neutral) but also on feelings and emotions (angry, happy, sad, etc), and even on intentions (e.g. interested v. not interested).

Social Media Sentiment Analysis is to analyse social conversations online and determine deeper context as they apply to a topic, brand or theme. Sentiment analysis uses various Natural Language Processing (NLP) methods and algorithms. The main types of algorithms used include:

* Rule-based systems that perform sentiment analysis based on a set of manually crafted rules.
* Automatic systems that rely on machine learning techniques to learn from data.
* Hybrid systems that combine both rule-based and automatic approaches.

Data collection:

The top most social media websites are Twitter, Facebook, Instagram, and Blogger. There are free and paid tools to extract data from these. They are:

* Octoprase
* Datahut
* Dexi.io
* Parsehub
* OutWit Hub
* Scrapinghub
* Mozenda
* Import.io

Some social media sites provide API key to developers to collect the data from the respective social media by not violating norms. Site like – Twitter and Facebook. The process involved to access Twitter Authentication are:

1. Go to https://apps.twitter.com.
2. Log in to twitter account.
3. If don't have an app already, click "Create New App" and proceed to step 5.
4. Otherwise, select your app and skip to step 6.
5. Fill out the information and click "Create your Twitter application".
6. Click on the "Keys and Access Tokens" tab.
7. Copy down the "Consumer Key (API Key)" and "Consumer Secret (API Secret)".
8. Scroll down to "Your Access Token".
9. If you don't already have an access token, click "Create my access token".
10. Copy down the "Access Token" and "Access Token Secret".

**For accessing to the Twitter API, you will need:**

* Consumer Key (API Key),
* Consumer Secret (API Secret),
* Access Token,
* Access Token Secret.

Similar way for accessing Facebook API the process involved in Facebook Authentication are:

1. Go to https://developers.facebook.com/apps/.
2. Log in.
3. If you don't have an app already, click "Create New App" and proceed to step 5.
4. Otherwise, skip to step 7.
5. In the top right corner, click the green button called "Add a New App".
6. Fill in the display name in the pop-up window and click "Create App ID".
7. In the left navigation bar, go to Settings > Basic.
8. Copy down the "App ID" and "App Secret" (you might need to click "Show" to get this to appear). Go to https://developers.facebook.com/tools/explorer/.
9. In the top right corner, make sure that you select the app you just created in the "Application" dropdown menu. Below that, click "Get Token" > "Get User Access Token".
10. In the "Select Permissions" dialog, make sure to select "read\_insights" in the Other section, and feel free to. select anything else.
11. Click "Get Access Token" and then click "Continue as (your name)" in the pop-up window and then click "OK" when Facebook asks to access your Page and App Insights
12. Copy down the "Access Token" that is generated

**For access to the Facebook API, you will need:**

* Access Token

For some social media sites there is no need of authentication keys like Instagram.