**Real time problem:**

COVID-19 has turned the world upside down. Every aspect of our lives has an impact. A predictive analysis to know people’s sentiment towards the epidemic and also to understand the sentiments of people on government decision to extend the lockdown.

**Overview:**

* Analysis on emotions and tones of people using Tone Analyser.
* Powerful Insight Extraction using Natural Language Understanding.
* Visualise the results in the form of graphs and wordcloud.

**Sentiment Analysis:**

Twitter Sentiment Analysis allows a deeper understanding of people’s feelings and opinions. It adds an extra layer to the traditional metrics used to analyze the performance of brands on social media and provides powerful opportunities for improvement.

**Significance of Twitter Sentiment Analysis:**

* Twitter sentiment analysis allows you to keep track of what’s being said on social media and can help you detect negative mentions before they turn into a major crisis.
* Twitter sentiment analysis allows you to track and analyze all the interactions which is very useful to analyze different sentiment based on the type of feedback received.

**Sentiment analysis for Government:**

Sentiment Analysis (SA) method to analyze tweets polarity and to enable government to describe quantitatively the opinion of active users on social networks with respect to the topics of interest to the Public Administration.

**Vision:**

1. Get to know people’s sentiment towards the epidemic

2. Understand the sentiments of people on government decision to extend the lockdown

**Strategy:**

To improvise the existing COVID-19 dashboards to give better accurate results and also reduce the resources, time consumption to build a new product.

**Technical details:**

* Dataset comprises of COVID-19 related tweets collected from trusted sources and extracted using Hydrator.
* Pre-processing of extracted tweets to infilter non-ascii characters and emojis.
* Analyse emotions of people using Watson Tone Analyser.
* Analyse the sentiments and categorize tweets based on targets and keywords to get a powerful insight using IBM Natural Language Understanding.
* Visualise the results in the form of graphs and wordcloud.
* Interactive webpage is designed to showcase the results and to collect valuable opinions and issues due to COVID-19 directly from the users.
* Dynamically changing wordcloud is used to represent the major concerns of people based on the opinions collected.

**Technologies used:**

* HTML, CSS, Javascript
* MySQL DB
* Pycharm IDE
* IBM Watson Tone analyser.
* IBM Natural Language Understanding.

**Future works:**

* Continuous monitoring and real-time extraction of tweets.
* Sarcasm detection.
* Filter the unrelated Tweets (Spam, junk, marketing, news and random).
* To improve the service quality.
* Automate media monitoring process and the accompanying alert system.
* Monitor mentions or reviews of the brand on different platforms (blogs, social media, review sites, forums, etc.)
* Categorize urgency of mentions according to the relevancy scoring (i.e., which platform, type of user is vital to the brand).
* Sentiment analysis can transform the course of action from reacting to managing the perception.
* Voice of the Customer Analysis.
* Identifying detractors and promoters.