

Covid-19 Twitter Sentimental Analysis

Team- Matrix2.0

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Problem Statement

- The sentiment analysis of Indians after the extension of lockdown announcements to be analyzed with the relevant #tags on twitter and build a predictive analytics model to understand the behavior of people if the lockdown is further extended. Also develop a dashboard with visualization of people reaction to the govt announcements on lockdown extension.

Solution

- The complete project is done using **Node-Red** in IBM Cloud
- **Node-RED** is a flow-based development tool for visual programming developed originally by **IBM** for wiring together hardware devices, APIs and online services as part of the Internet of Things. IBM Tone analyzer is used for analyzing the sentiment of each tweets.
- For sentimental analysis **IBM Tone Analyzer** is used. The twitter data is streamed using twitter in node. The data is pre-processed and then sent to the Tone analyzer node. From there the the scores and sentiments are classified and sent to respective output nodes.
- Using **IBM Watson Text To Speech** the project further has a feature which converts the text(tweets) to speech(audio) and helps the visually challenged to know about the tweets based on the given input hashtag/trend

Technology Stack

- IBM Cloud
- The entire project is done in IBM Cloud platform
- **IBM WatsonTone Analyzer**
- The **IBM Watson Tone Analyzer** service uses linguistic analysis to detect emotional and language tones in written text. The User Interface displays the sentiment score for the respective live tweets.

IBM Watson Text To Speech

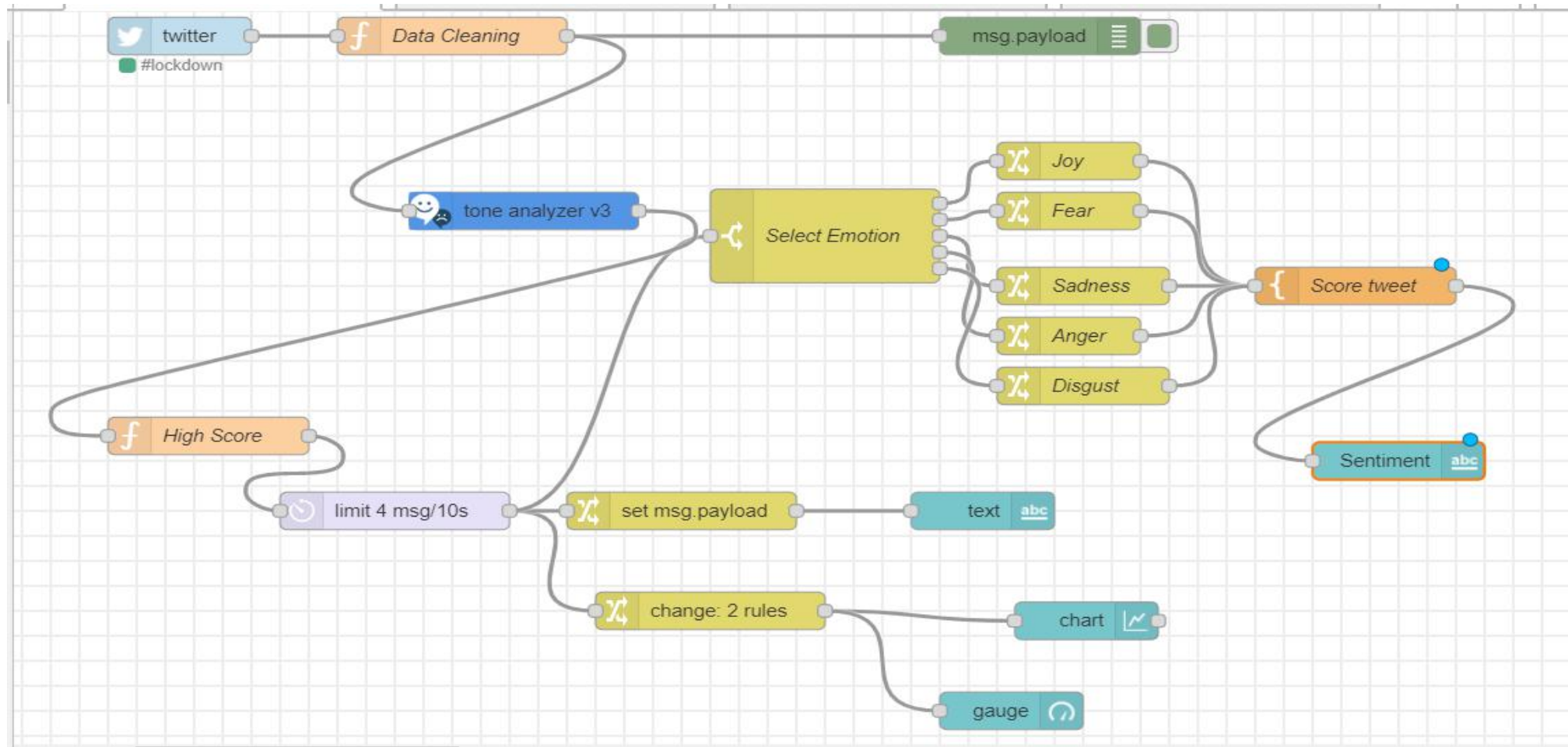
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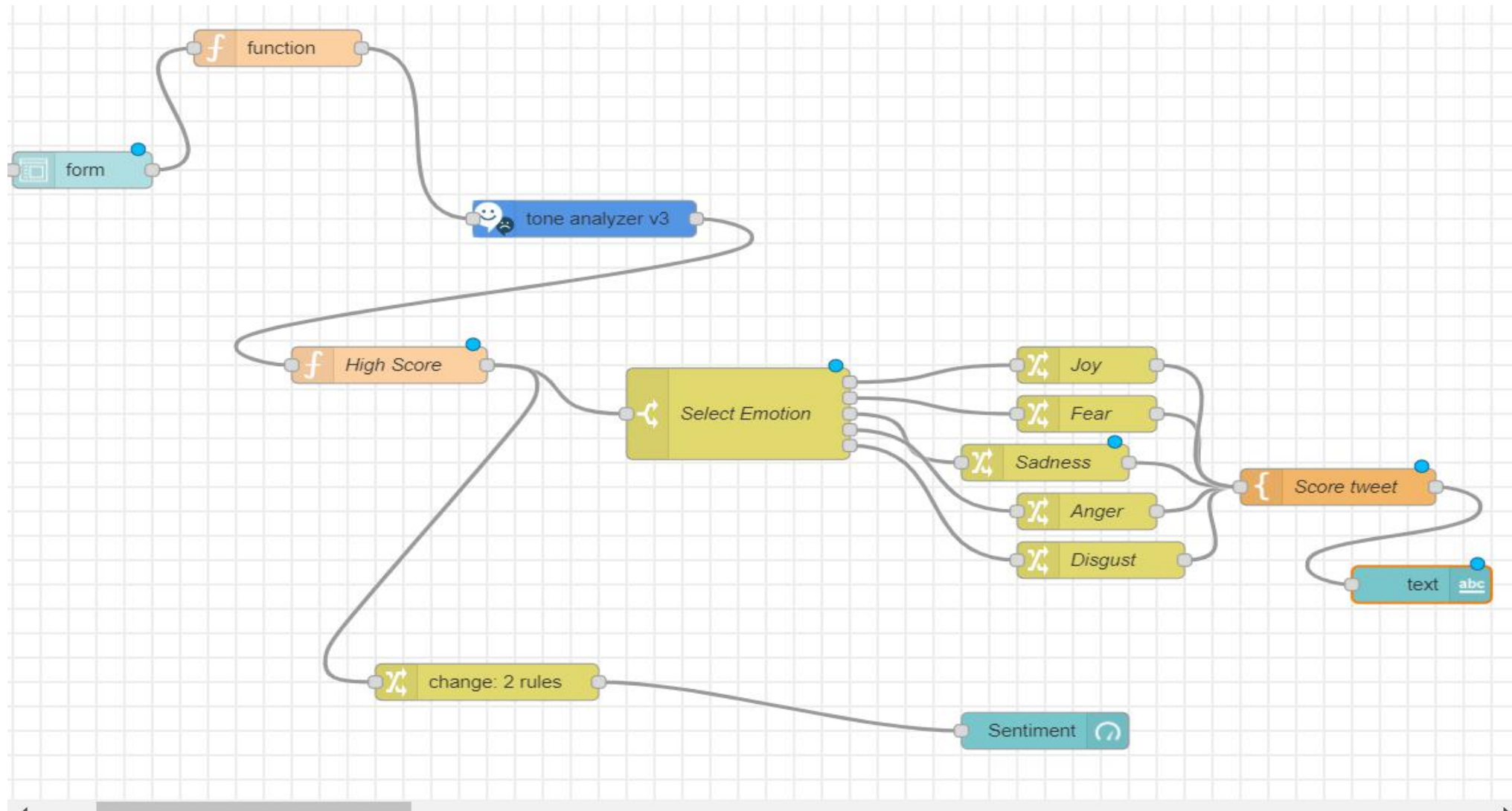
Node-Red Flows



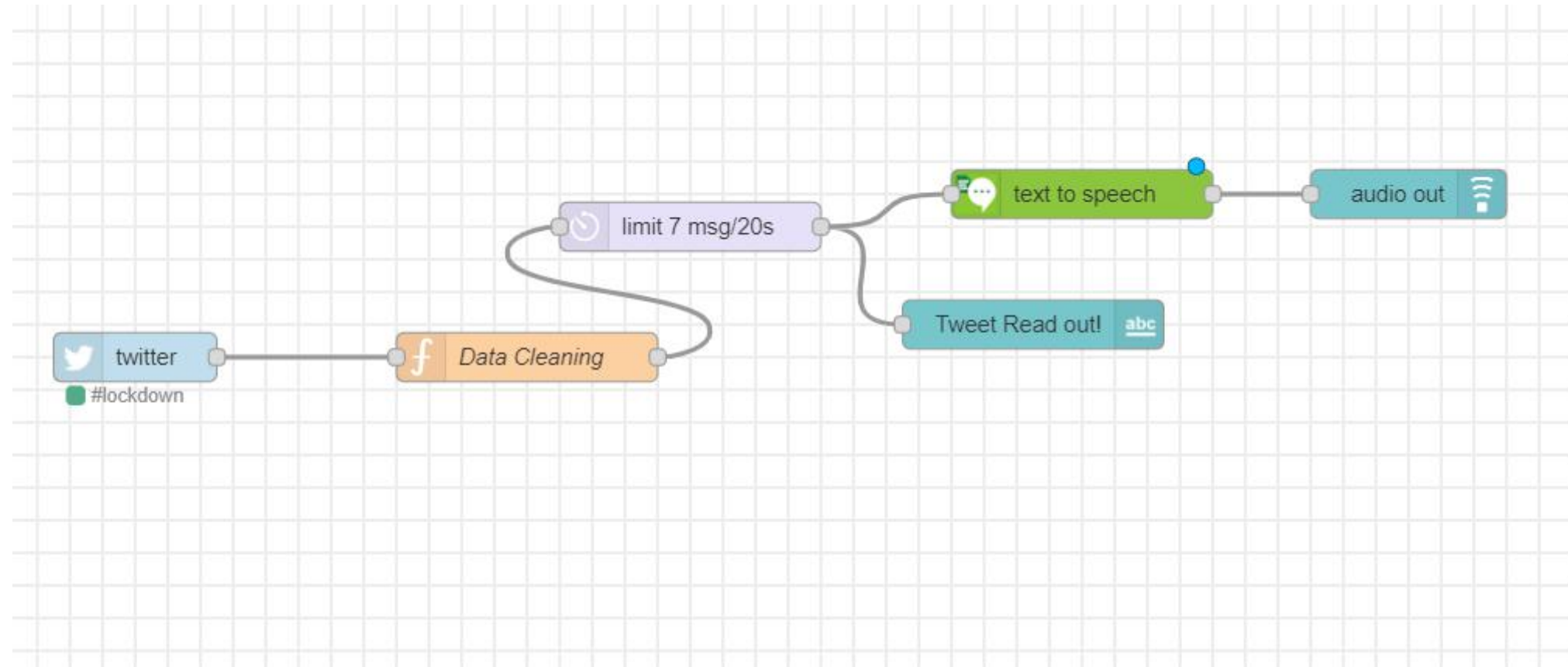
i) Live feed



ii) Manual Input



iii) Assistance For Visually challenged



A large, dark blue, irregular ink blot or splash is centered on a white background. The blot has a textured, painterly appearance with various shades of blue and black. Numerous small, dark blue droplets and splatters are scattered around the main blot, particularly towards the top and right edges.

Output/UI

I)Home Page

Call for Code 2020

Twitter Sentiment Analysis

Sentiment Analysis is the process of 'computationally' determining whether a piece of writing is positive, negative or neutral. It's also known as opinion mining, deriving the opinion or attitude of a speaker.

[Try Here](#)

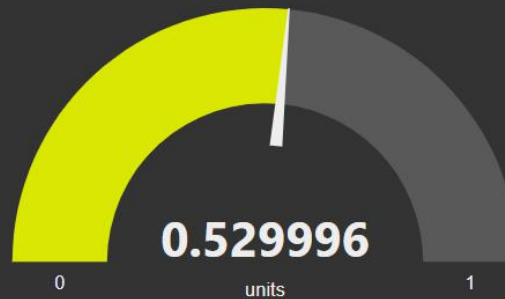
ii) Main UI

≡ Sentimental Analysis

Tweets

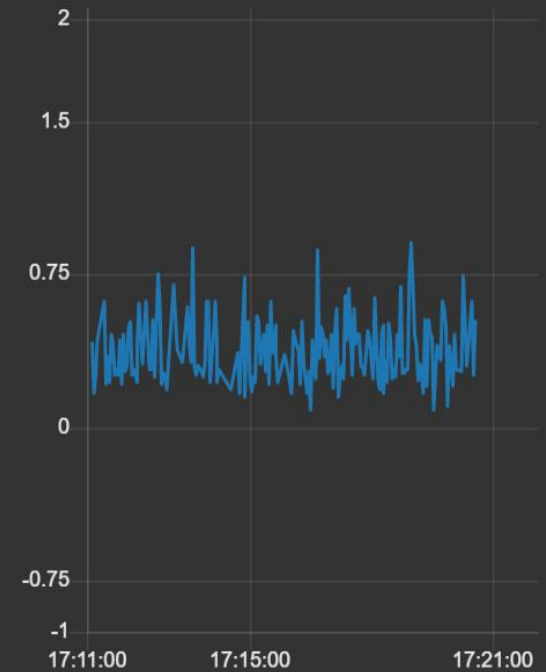
RT @NairShilpa1308: Tamil Nadu government suspends public and private bus services in the state till July 31. #TNCoronaUpdates #Lockdown

Tweet Details

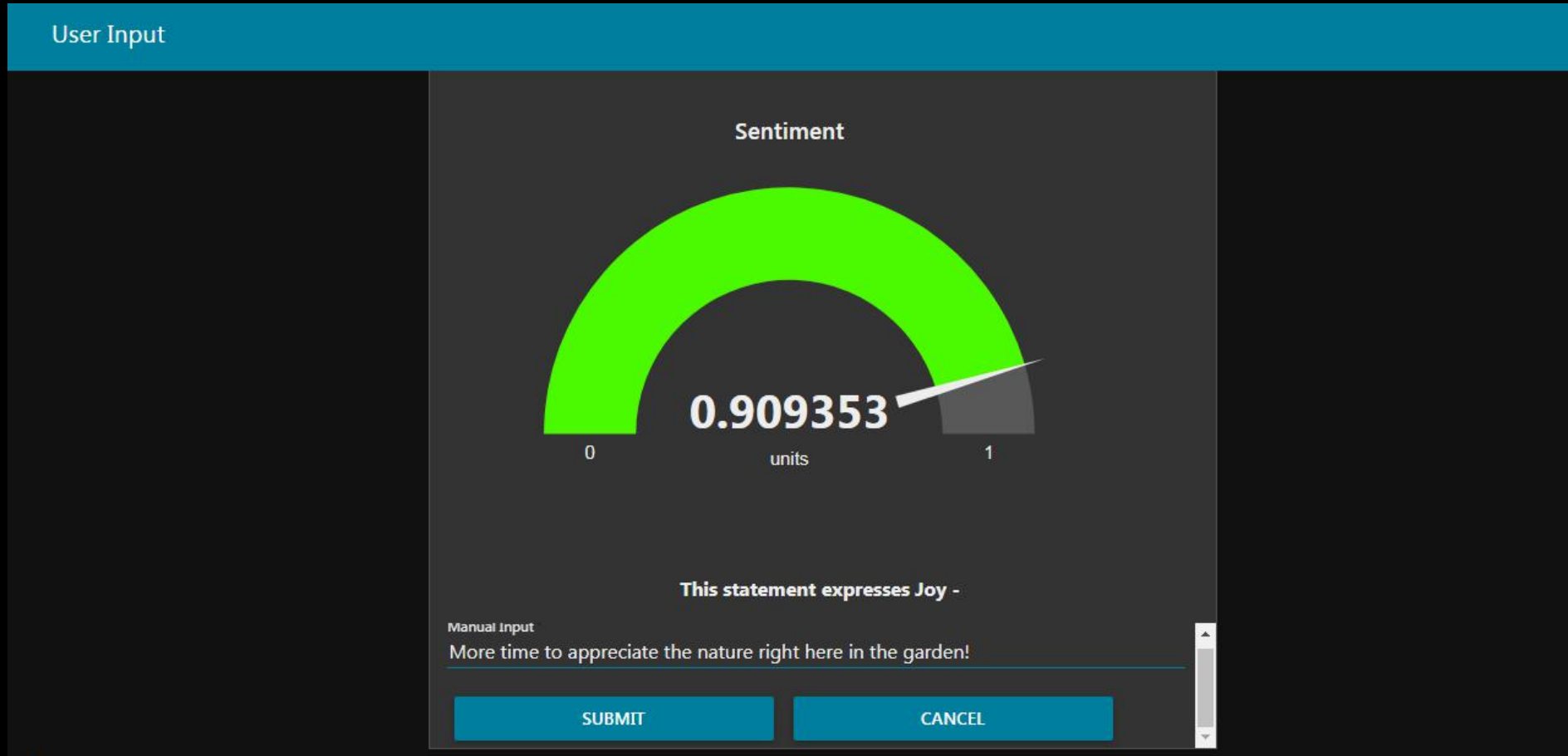


Sentiment
This tweet expresses Disgust

Graphical Representation



iii) User Input



iv)Audio Output

≡ Audio

Audio output

Tweet Read out!

RT @HardiSpeaks: Following additional activities have been permitted in the ongoing Hash tag Lockdown in Kamrup (M) till July 19, 2020. <https://t.c...>

ADVANTAGES

- Its easy to analyze the user's sentiment.
- It can provide valuable insights and thus help organizations to formulate effective business strategies.
- It can help firms to monitor brand and product performances, handle customer grievances, get in-depth information for strategic analysis.
- Helps government in strategic planning.

DISADVANTAGES

- ➤ The efficiency of results is relatively poor in the case of sarcastic statements.
- ➤ The configuration of nodes can be little complex.



APPLICATIONS:

- ➤ Can be used by government authorities.
- ➤ Can be used in business planning.
- ➤ Analyze trends and patterns.
- ➤ Historical track of public opinions.



CONCLUSION:

- We have tried different types of libraries and tools and finally arrived at a conclusion that IBM Tone analyzer was more accurate in the sentiment prediction. Using this we have performed further analysis on the extracted data from twitter and the results were visualized in the dashboard.



Thank you!

Done by:-

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