Web Based Dashboard For COVID-19 Twitter Sentiment Analysis

Project Submitted by:

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Introduction & Goal of the Project:

Social media platforms have evolved into an essential interface between the government and citizens. The social media came into existence as informal and fun applications but was eventually put to use strategically by the corporate world to sense customer satisfaction and assess the customer requirements for planning their retail markets. It was only recently, say over the last decade that the Government has been using social media to communicate with citizens and to analyse the public opinion of the various policies being introduced. Twitter has been one of the most popular medium for political debates and we have witnessed several fiery discussions that have led to communal disharmony across the country in the recent past. The goal of this project was to build a dashboard to visualise the sentiment of the citizens in real time using the Twitter content.

Sentiment of the Pandemic:

The use case for this project was to visualise the sentiment of the general public in the context of the Covid Pandemic. Since March 2020, the general sentiment was largely driven by the decisions of the Government in trying to flatten the curve by imposing lockdown measures of various degress and wearing of masks to name a few. There is however an interesting opinion swing based on annoucements and other news feeds and this can be captured effectively using various software tools. The design of the flow is generic and inorder to make it Covid specific the Tweets that were analysed were based in the following **HashTags**:

#covid19, #covid_19, #covid-19, #coronavirusoutbreak, #covid2019, #Coronavirus, #SARSCoV2, #virus, #SocialDistancing, #stayhome, #flattenthecurve

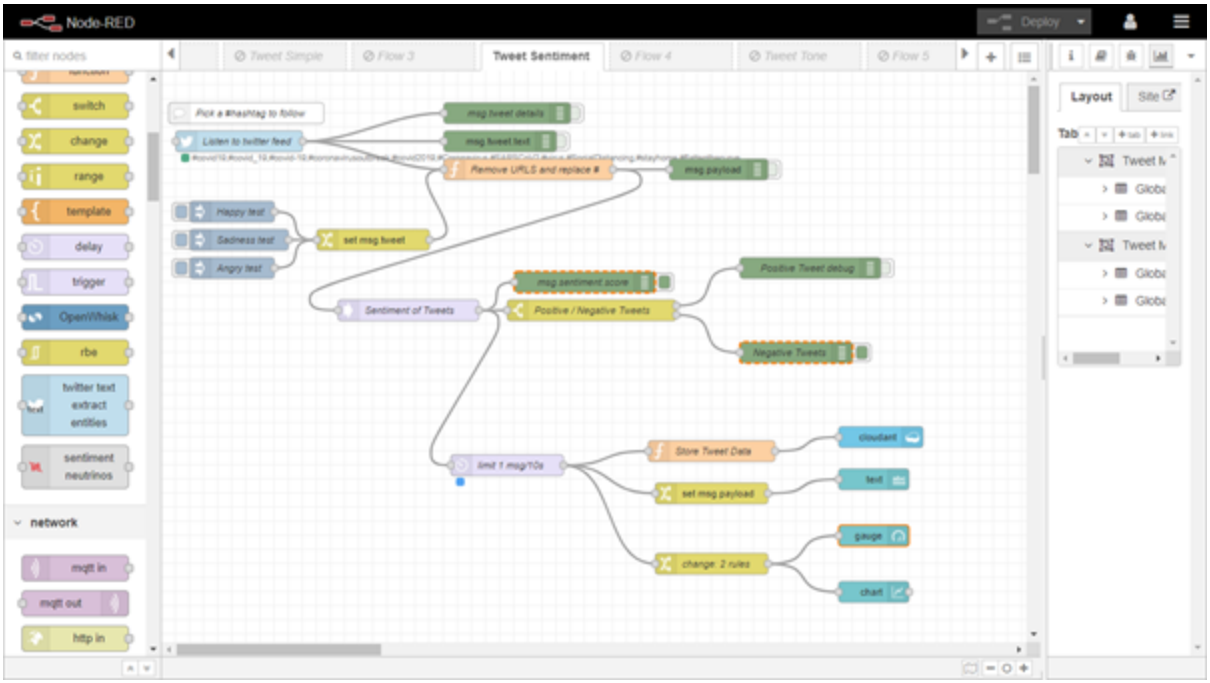
Twitter Developer Account:

The first challenge was in obtaining a Twitter API and Access Keys. Using the Twitter developer credentials the Twitter Node was created in Node-Red sucessfully. Meanwhile Tweets were also collected using a Python Script in the Command Prompt. Pickle files were obtained and converted into CSV format. Thus two tasks were acomplished successfully.

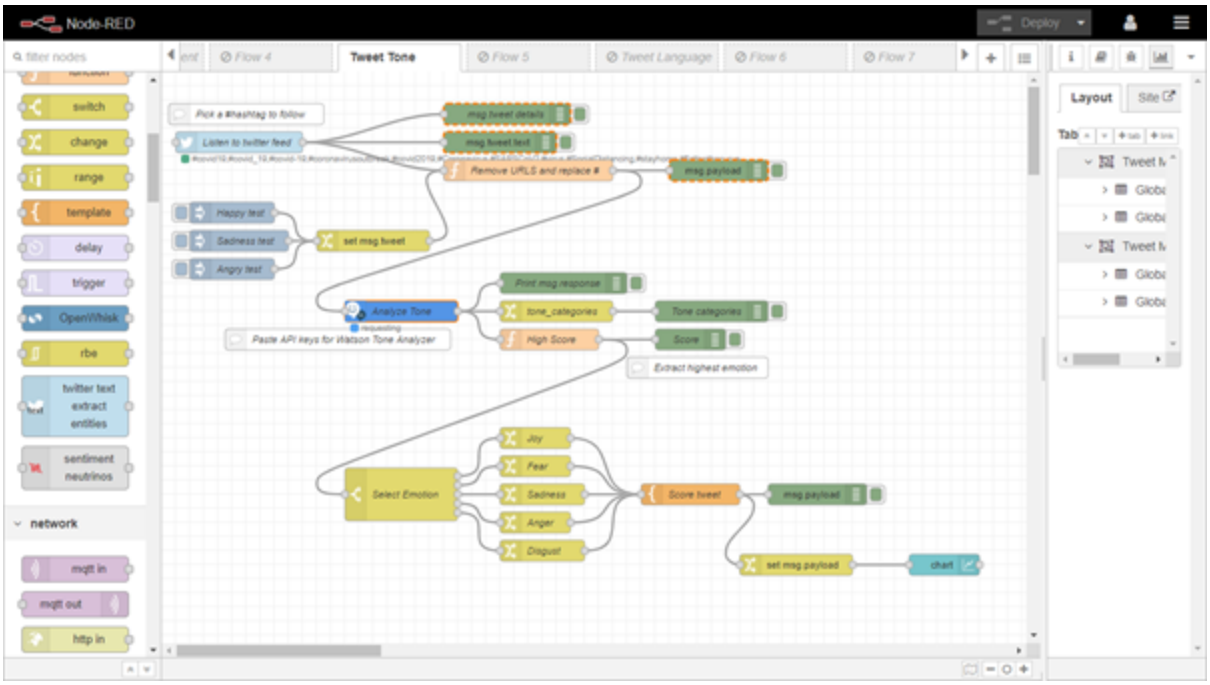
1. Twitter API was used to obtain Live Tweets in Node-Red using the Twitter Node
2. A dataset of Tweets was created by extracting Covid related Tweets over the last 7 days

Node-Red Flow Design:

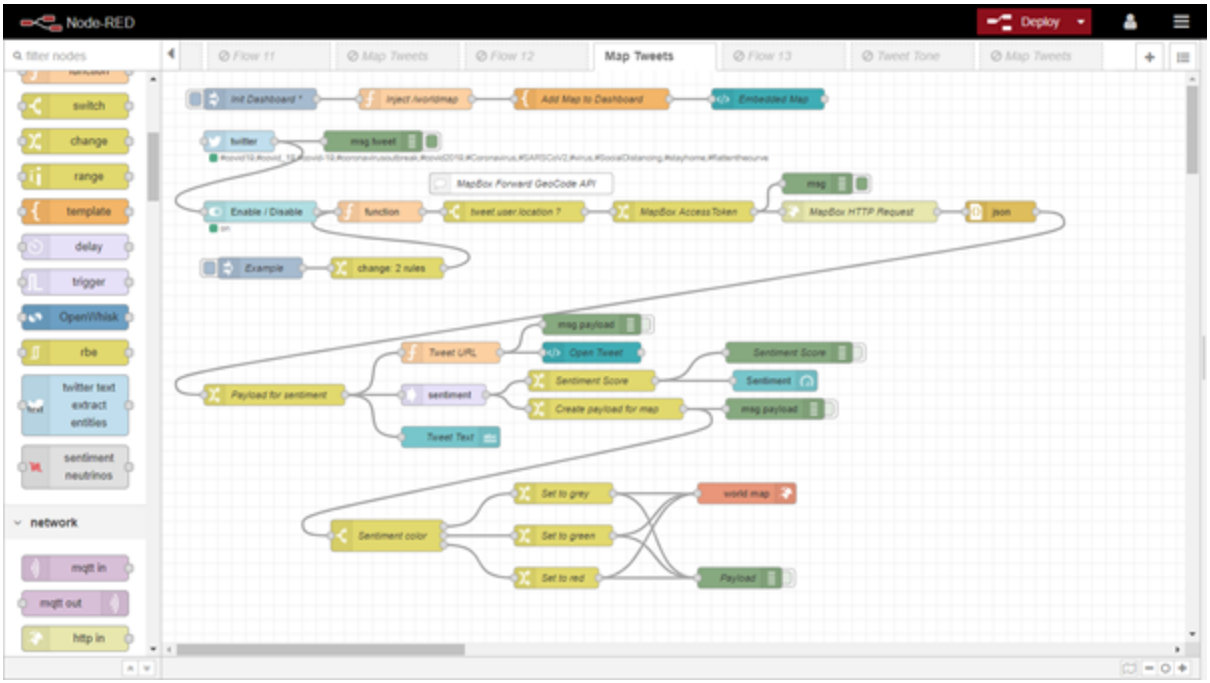
Simple Tweet and Sentiment Analysis:

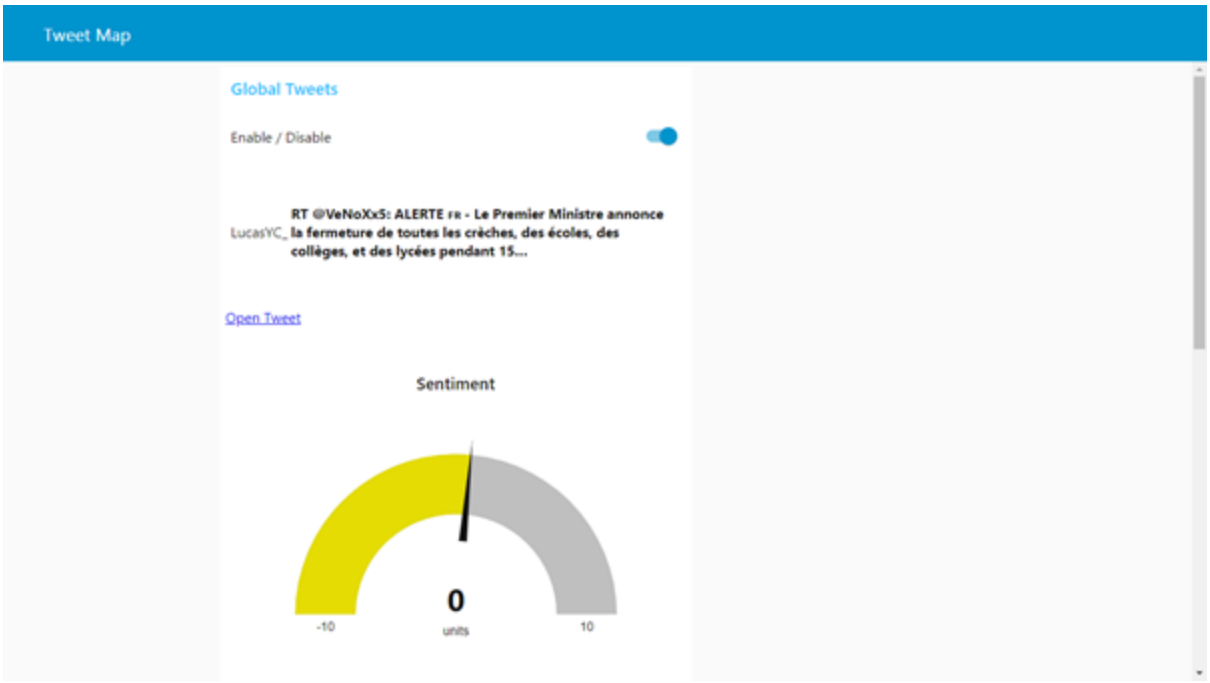


Tone Analyser:



Realtime Sentiment Dashboard:




Tweet Map
Global Tweets
Enable / Disable
LucasYC_
RT @VeNoXx5: ALERTE FR - Le Premier Ministre annonce la fermeture de toutes les crèches, des écoles, des collèges, et des lycées pendant 15...
Open Tweet
Sentiment
0
units
-10
10