



IBM Hack Challenge 2020

Sentiment Analysis Visualization Dashboard On Covid - 19 Tweets

Team Name - **Missing Semicolon**

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How do we collect tweets ?

We collect tweets in **two** different ways

1. **Live Stream** (not the best way)
2. **Collection of tweets between time intervals** (every 8 hours)

Why Live Stream collection isn't the best ?

There are some **restrictions** in the Twitter API. Some of them are.

1. **We can't send request to the twitter API for more than 15 mins**
2. **If we do so, Twitter may send 401 as the response**

That's why we haven't used this method as the primary source for the tweets



How do we predict sentiment and emotions ?

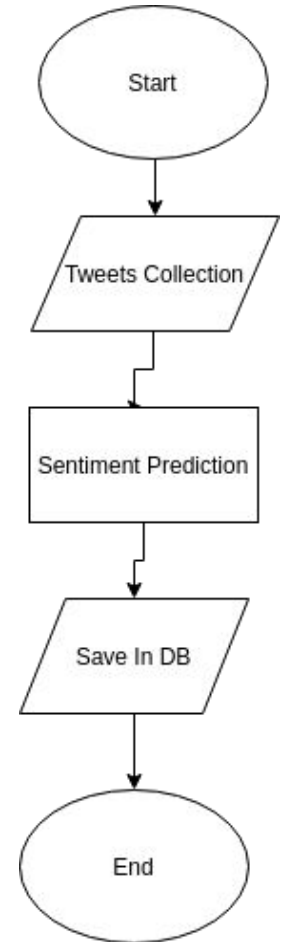
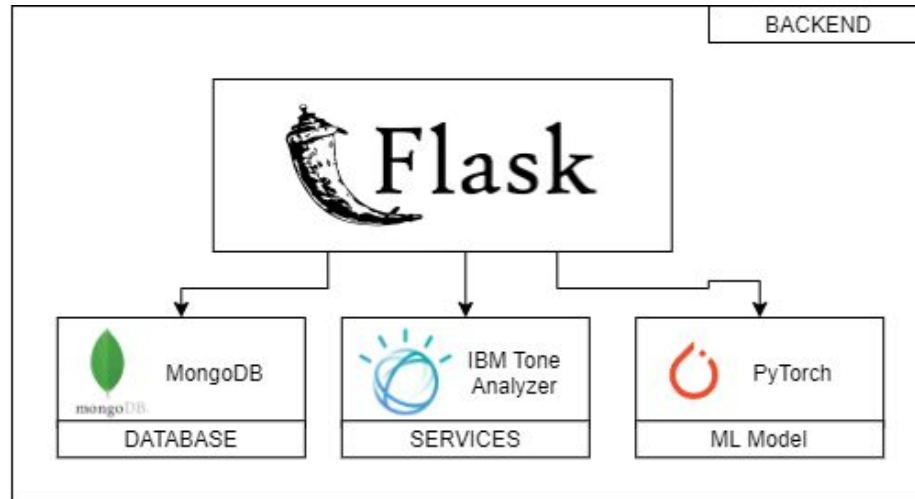
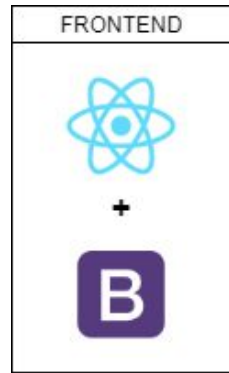
We have used two methods to **predict the sentiment level and the emotions level** of the tweets.

1. IBM Watson Tone Analyzer
2. IBM Watson NLU
3. Our own ML Model

We used our own **ML model** to predict the **sentiment level** of each tweet. Because, if we send each tweet to the **IBM's API**, it may exhaust the API limit very quickly.

We have used Pytorch and Scikit learn library to build our ML model. And we deployed it in our REST API.

Application Flow And Design





Key Features

- Analysis on Real Time Data
- Keep track on trending hashtags related to lockdown, covid (**ex: unlock**)
- Day Wise Report
- Monthly Report
- Detailed Analysis such as Top Influencers, Sentiment Levels on different states.
- Add and edit the hashtags that needs to be explored.



Application Links

Youtube Demo Video Link - <https://youtu.be/VOov5hqbAx0>

Github Link -

<https://github.com/SmartPracticeschool/SBSPS-Challenge-839-Sentiment-Analysis-Visualization-Dashboard-On-COVID---19-Tweets>