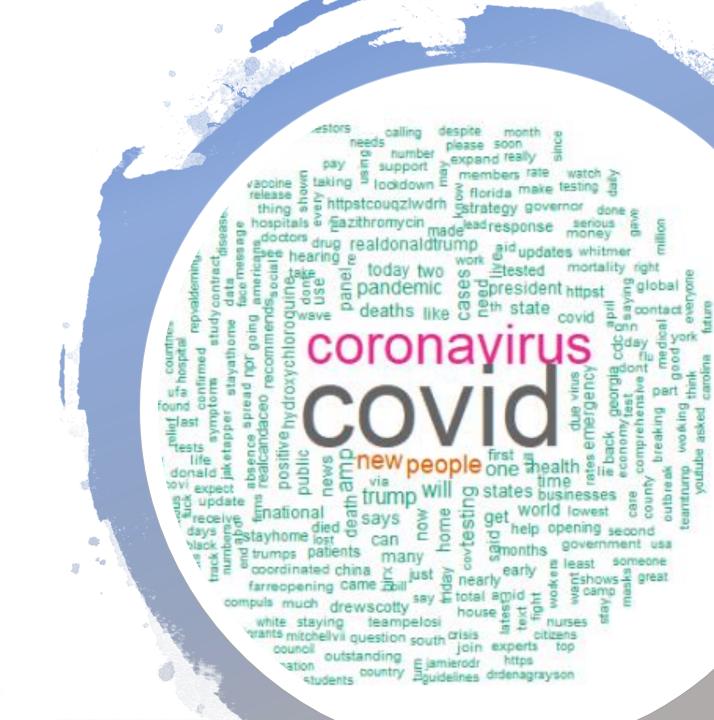
OPINION MINING WITH TWITTER

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OBJECTIVE

• To analyze people opinion on present health crisis- COVID19.

• Sentiment Analysis, is a useful tool within NLP to identify people reaction

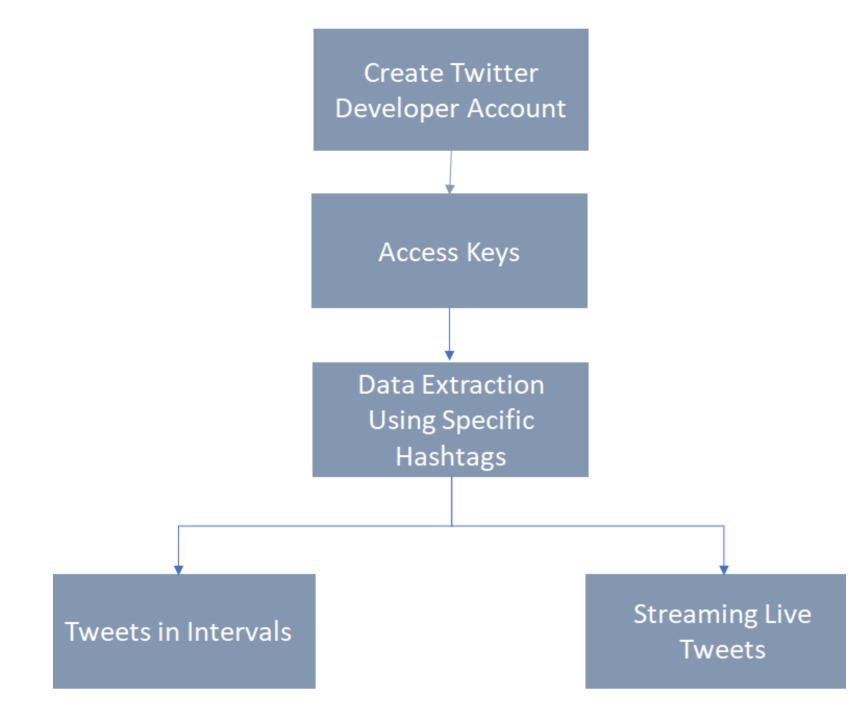
to existing situation.

• Twitter is one of the popular social media.



OVERVIEW OF TWITTER DATA

- 2.5 Lakhs Tweets from United States.
- Tags:
 - #COVID-19,
 - #StayAtHome
 - #CoronaVirusUSA
 - Etc.



DATA PREPROCESS

- Removing unnecessary characters
- Stop Words etc.

Text Cleaning

Labelling

- Positive and Negative Tweets
- QDAP Dictionary

• 50% of each sentiment scores

Balancing Data

Tokenizing

- Convert clean text to tokens
- Tokens to sequences

 List of integers to tensors

Vectorization

Input (Vectorized Text/Tensors) Dense(units=32) Dense Hidden Layer(units=16) Dense(units=1) Output

NEURAL NETWORK

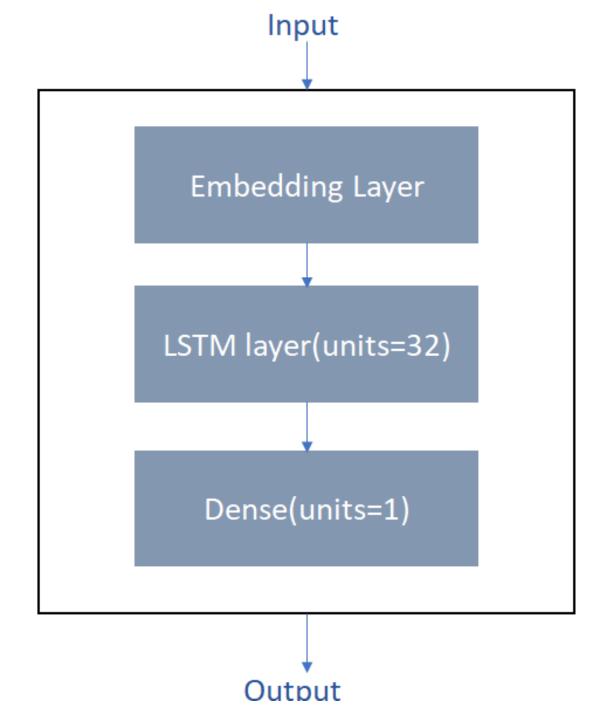
Model Specifications:

- Activation Function: RELU
- Output Activation Function: SIGMOID
- Loss Function: Binary_Crossentropy
- Optimizer: rmsprop
- Learning Rate: 0.001.

LONG SHORT-TERM MEMORY

Model Specifications

- Input_length: 20
- Output Activation function: Sigmoid
- Optimizer:rmsprop
- Loss:binary_crossentropy



REFINEMENT



HYPERPARAMETER TUNING



DROPOUT



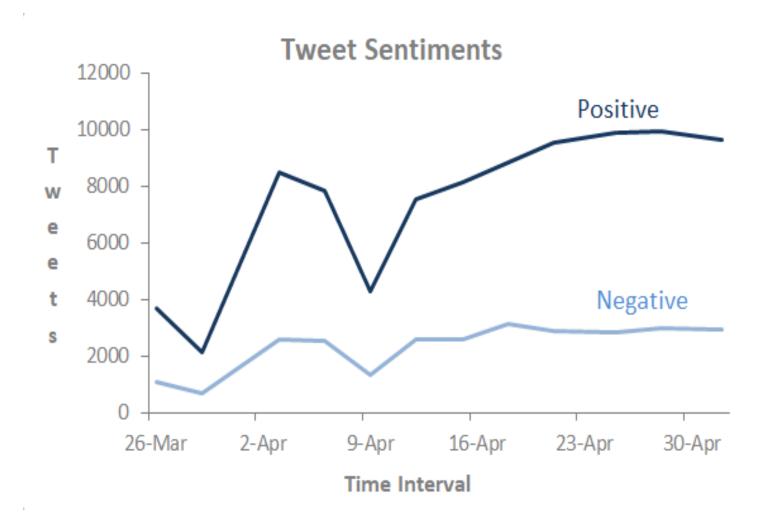
L-2 REGULARIZATION



CALLBACK

CONCLUSION

Recurrent Neural Network is used for the sentiment analysis from the United States tweets. As the data we extracted have an overview of the COVID-19 situation, we could see the POSITIVITY among the masses.



STAY SAFE