

# Twitter Sentiment Analysis.....Group 4

## Introduction and Goal

- Despite the abundance of information on social media, it is challenging to extract meaningful insights into public opinion and emotions. By using sentiment analysis techniques, this project will provide a comprehensive view of public sentiment.
- The goal is to develop a reliable sentiment analysis model that accurately captures public sentiments and provides actionable insights for the target audience.

## What we intend to do?

- We will apply traditional baseline methods for classification such as random forest and SVM.
- Tweet classification using Deep Learning: Using deep learning techniques such as Convolutional Neural Networks (CNNs) and Long Short-Term Memory (LSTM) networks to classify tweets based on sentiment.

## Concerns/scope of improvement

- The challenge lies in accurately analyzing the sentiment expressed in tweets, which are mainly influenced by spam tweets, and other fake or misleading tweets.

## Data sets

- The datasets will primarily be abstracted from twitter API,kaggle(<https://www.kaggle.com/datasets/arkhoshqhalb/twitter-sentiment-analysis-hatred-speech> )

# Work Division

- Dataset and literature survey- *Rohan*
- Coding and slides - *Debashish*
- Mathematical formulas, and proofs- *Rohan*
- Content writing - *Joint task*

# Midway Targets

- Preprocessing and cleaning of data.
- Successfully implement two traditional ml methods.(SVM,Random Forest)

## **Expected Results**

- We expect to capture public emotion with higher accuracy.

# Reference

- Twitter Sentiment Analysis using Deep Learning:  
[https://www.researchgate.net/publication/352780855\\_Twitter\\_Sentiment\\_Analysis\\_using\\_Deep\\_Learning](https://www.researchgate.net/publication/352780855_Twitter_Sentiment_Analysis_using_Deep_Learning)
- Comparative Studies of Detecting Abusive Language on Twitter:  
<https://arxiv.org/pdf/1808.10245v1.pdf>