

Term Project - Milestone 2

Group Details		
Serial	Name	ID
1	Muhammad Nadeem	201980050
2	Muniem Billah	191400021
3	Muhammad Danish Javed	191400055
4	Abdul Haseeb	191400011
5	Muhammad Haris	191400035

Selected Application:

Twitter Sentiment Analysis.

Literature Review:

Sentiment means **Emotion's**.

In which we make that type of Algorithm's those Who sense the content weather it is negative, positive, or neutral. From Twitter comments we find from content weather it is negative, positive, or neutral.



In this project, we try to implement a NLP Twitter sentiment analysis model that helps to overcome the challenges of identifying the sentiments of the tweets. The necessary details regarding the dataset involving twitter sentiment analysis project.

Project Pipeline:

The various steps involved in the Machine Learning Pipeline are :

- Import Necessary Libraries
- Read and Load the Dataset
- Data Pre-processing
- Data Cleaning
- Exploratory Data Analysis
- Data Visualization of Target Variables
- Splitting our data into Train and Test Subset
- Model Building Deployment
- Conclusion

About Models That we used in this process:

In which we implement three models that are.

Support Vector Machine(SVM):

Support Vector Machines (SVM) is a classification algorithm used for text classification tasks, such as sentiment analysis, it can handle non-linearly separable classes. SVMs can also handle noisy and imbalanced data. Overall, SVMs are a suitable algorithm for Twitter sentiment analysis due to their ability to handle high-dimensional, non-linearly separable data.

Random Forest (RF):

Random Forest is a machine learning algorithm that can be used for classification tasks, including sentiment analysis. It is a type of ensemble learning algorithm that combines multiple decision trees to make a prediction. Random Forest can be particularly useful for sentiment analysis on Twitter because it is able to handle high-dimensional data with a large number of features, and can effectively handle noisy and unbalanced datasets.

Multinomial Naïve Bayes(MultinomialNB):

Multinomial Naive Bayes is a commonly used algorithm for text classification tasks like sentiment analysis. This is because it is fast, scalable, and easy to implement. It is particularly suited to problems where the data has many features (such as text data), and where the features are relatively independent of one another.

The End