TWITTER SENTIMENTAL ANALYSIS

Group Members:

- Rayyan Shabbir (BITF20M535)
- Muhammad Bilal (BITF20M512)
- Syeda Mujab Fatima (BITF20M527)

In the era, the people are affable on social media sites, and emphasize their life decisions on other people's opinions. People follow their ideals and try to imitate their lifestyle. Moreover, there are a lot of social sites which are well-recognized around the globe and millions of people are using them to get reviews on different products and services. That's the reason why sentimental analysis programs are being developed progressively to process information provided on sites and to determine the emotions of people related to different services or products.

Twitter is one of the most widely known social media platforms, and we are developing a system to analyze the feelings of *Twitter* users towards divergent trends.

This ***AI based Machine Learning Model*** will examine the written words of users, and will differentiate them on basis of their nature or feeling. In this way, it will provide a great source of information.

In the first step, we will gather the labelled dataset from *"Kaggle"*, and will split up the dataset into three parts; *training, validation/development, and testing*. The training data will be converted into a zip folder. Next, we would deploy our training data on Google Collab, which is an excellent tool to run machine learning models with cloud storage capacity. The zip folder will be uploaded on the google drive and then it would be extracted through Collab.

We will implement our model using *Python* programming language, as it provides all the skillsets that are required to develop a machine learning project. The famous libraries of python including ***Pandas, Scikit-learn, NumPy, Matplotlib, Seaborn, Scipy, Tokenizer, Textblob, and Tweepy,*** will be imported during the setup of code.

We will apply the *classification* type of machine learning, in the algorithm of Supervised Machine Learning, to classify the three general sentiments of tweets posted on the forum of twitter, which are ***positive, negative or neutral*.** In addition to this, we will also explore some other algorithms which we will find fruitful for building our model. After that, the model will be validated.

Lastly, the model will be tested by calculation of accuracy, recall, precision and f1 score, based on tested data.

Thus, ***Twitter Sentimental Analysis*** is a highly recommended system, which is a need in modern life. It lets users decide which product, service or trend to adopt, on basis of the sentiments associated with the tweets they are pursuing.