# Twitter Sentiment Analysis (Twitter API + NLP)

## 1. Brief Introduction

In phase 1, we use Twitter API to have the tweets got, sent, etc. And we use Google NLP to analyze the emotion of the Natural language. Now we are combining these two in phase 2, we will get tweets using Twitter APIs and using Sentiment Analysis functions to analyze them, then make some visualized analysis.

In this phase, I switched the programming environment to Colab (https://colab.research.google.com/?utm_source=scs-index), because using local complier would make module importing troublesome.

This project can achieve:
① Get a specified number of tweets from a specified user. In this case, I choose JoeBiden to be the analyzed user.
② Filter unimportant information such as symbols and numbers in the obtained tweets
③ Calculate the subjectivity and polarity of each tweet, and give the sentiment
④ Plot the plane distribution of polarity and subjectivity

## 2. Functional Demo

- **List all the filtered tweets and give the sentiment**

| | Tweets | Subjectivity | Polarity | Analysis |
|---|---|---|---|---|
| **0** | : If COVID-19 reminds us we live in an age of ... | 0.500000 | 0.136364 | Positive |
| **1** | This work has been critical to our understandi... | 0.800000 | 0.000000 | Middle |
| **2** | What a fantastic leader Dr. Collins has been. ... | 0.720000 | 0.446667 | Positive |
| **3** | Thanks, as always, for the thoughtful convers... | 0.350000 | 0.300000 | Positive |
| **4** | Stephanie and Victoria had no plans to go to c... | 0.000000 | 0.000000 | Middle |
| **...** | ... | ... | ... | ... |
| **95** | Stopping Alzheimer’ s requires more eyes on the... | 0.416667 | 0.333333 | Positive |
| **96** | It’ s really encouraging to see these results. ... | 0.568750 | 0.393750 | Positive |
| **97** | This important commitment builds on the 's eff... | 0.583333 | 0.300000 | Positive |
| **98** | I am truly grateful for his wisdom and leaders... | 0.500000 | 0.318182 | Positive |
| **99** | I will always have a deep sense of accountabil... | 0.450000 | 0.250000 | Positive |

100 rows × 4 columns

*fig 1*

- Plot the distribution of Polarity and subjectivity

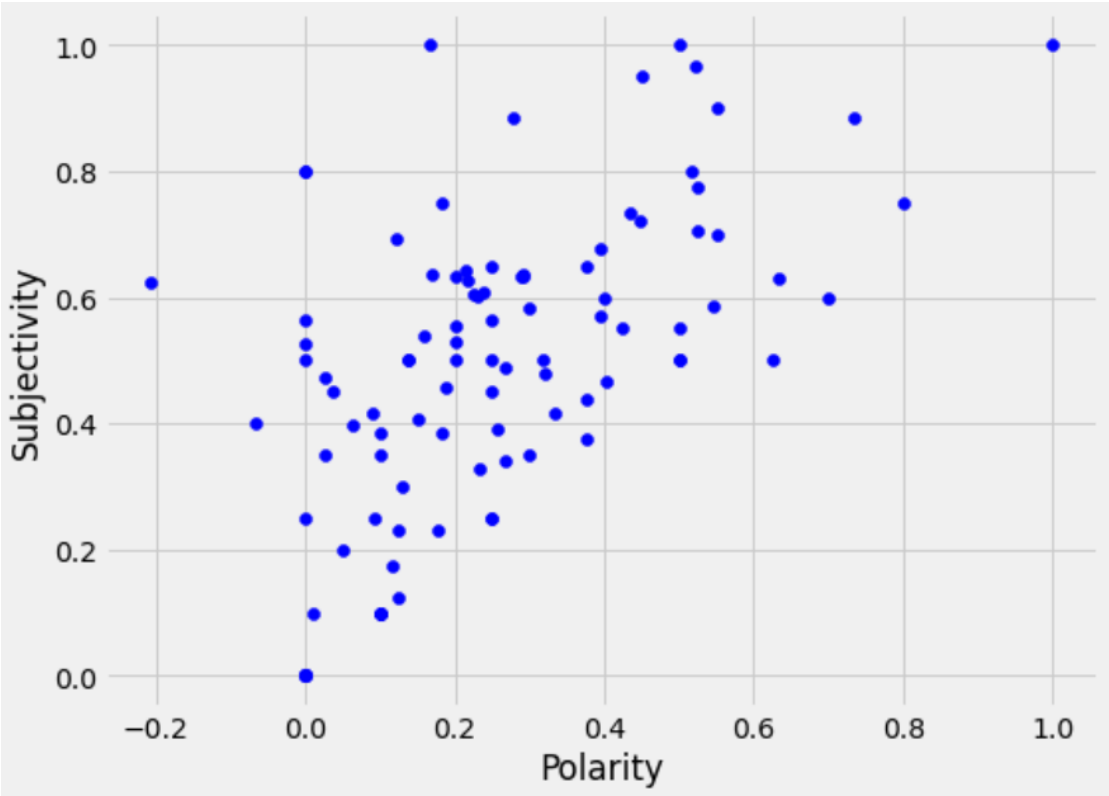


*fig 2*