

# Climate Change Twitter Sentiment Analysis

Pro-Clime Solutions

# Presentation Outline



**01**

Our Company



**03**

Exploratory Data  
Analysis



**05**

Model Development,  
Evaluation and  
Deployment



**02**

Project Overview



**04**

Data Preprocessing and  
Feature Engineering



**06**

Conclusion

# 01

## Our Company

## About Us

- New leading environmental technology company founded in 2022.
- We are a proudly African company.
- Expertise in Data Science and Environmental Research.
- We are solution driven and motivated by change.



# Our Key Values



Collaboration



Innovation



Efficiency

## Meet the Team



**Ereshia Gabier**  
Technical Lead Manager



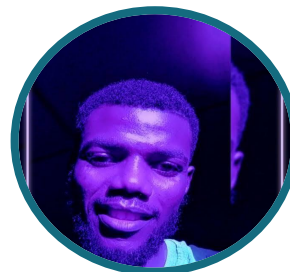
**Ikaneng Jack Malapile**  
Lead Data Scientist



**Thandolwethu Madondo**  
Senior Data Scientist



**Chukwunonso Azih**  
ML Engineer



**Ololade Ogunleye**  
Senior Business Architect

# 02

## Project Overview

# Climate Change

- Where we are today.

- What the future looks like.

- Paris Climate Accords was established in 2015.





# Climate Change Twitter Sentiment Analysis



The goal of this project is to build a model that will effectively categorise whether a person believes in climate change or not.



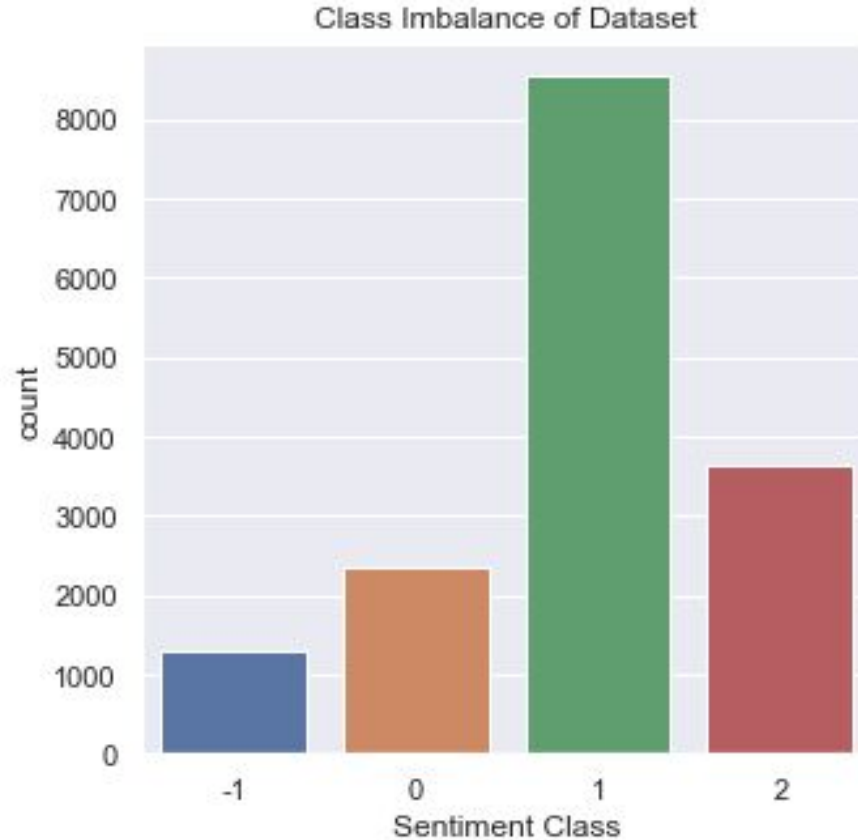
# 03

## Exploratory Data Analysis

# Exploratory Data Analysis



Overall positive  
sentiment towards  
climate change

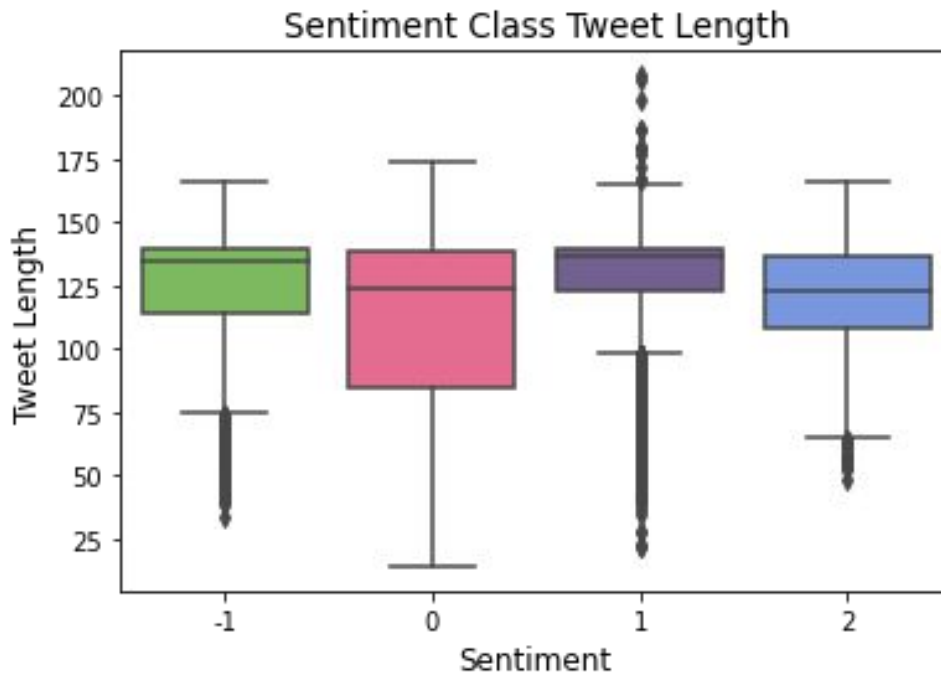


-1 : Negative  
0 : Neutral  
1 : Positive  
2 : News

# Exploratory Data Analysis



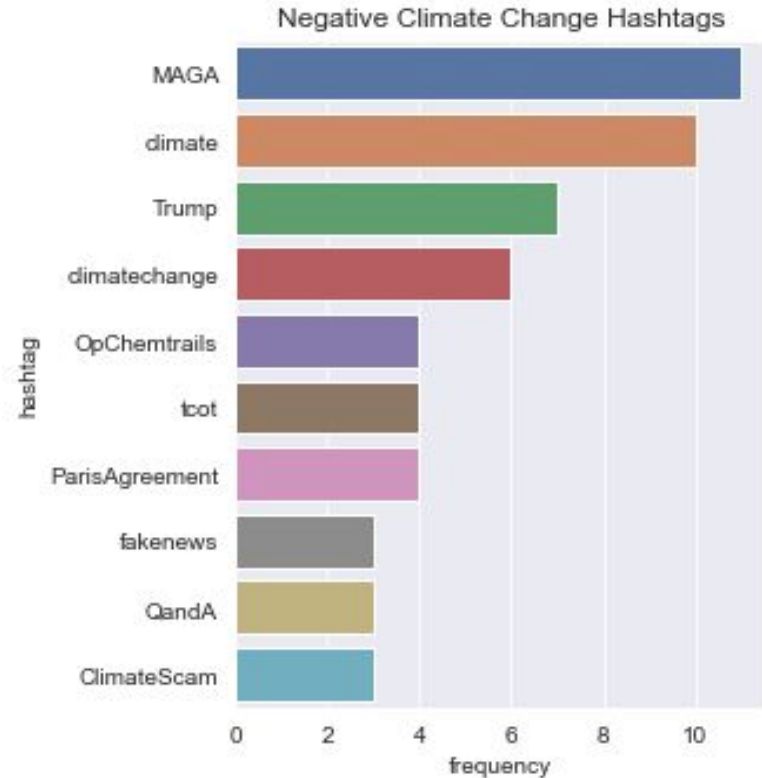
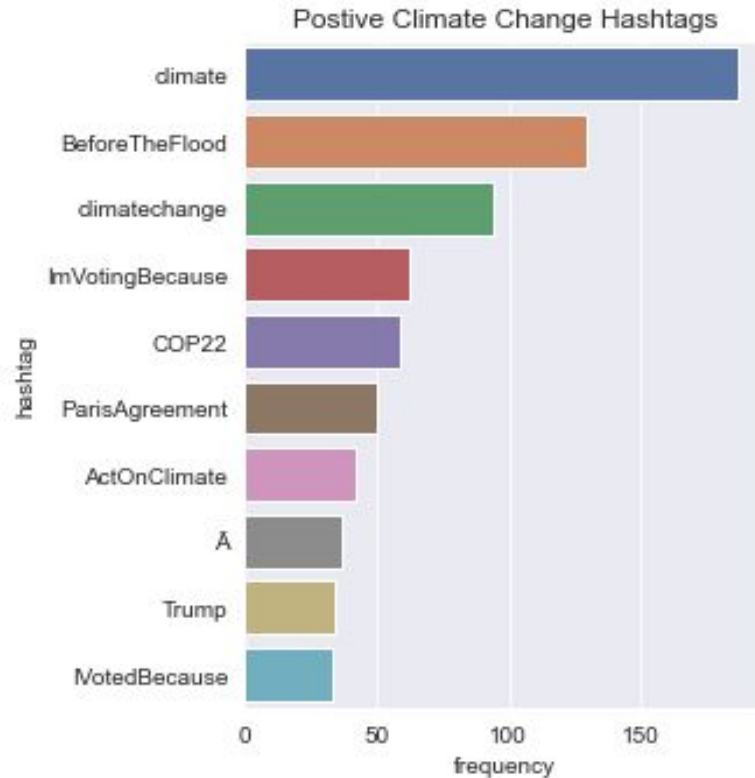
Outliers represent tweet lengths that are vastly different from majority tweets.



-1 : Negative  
0 : Neutral  
1 : Positive  
2 : News

# Exploratory Data Analysis

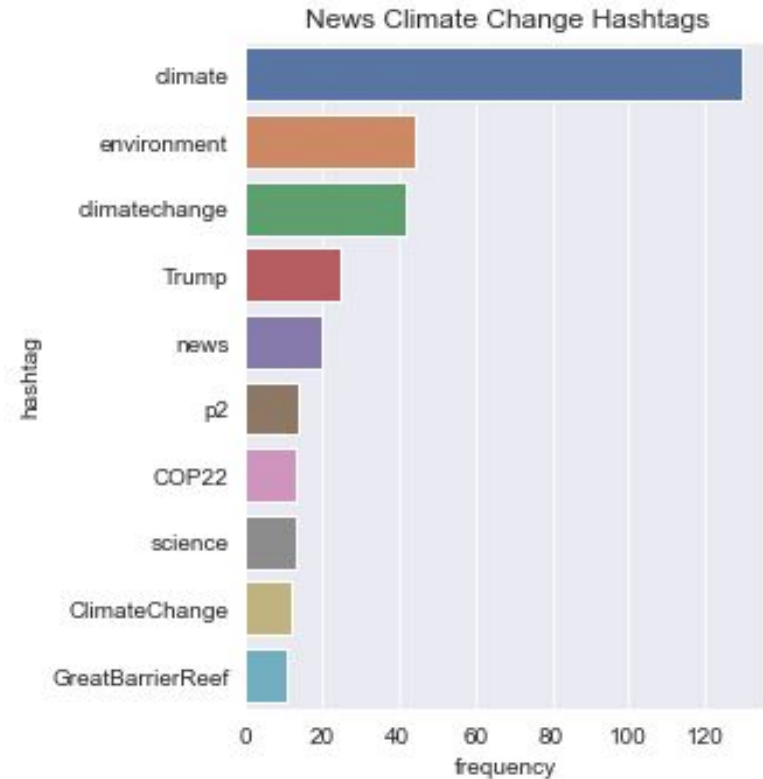
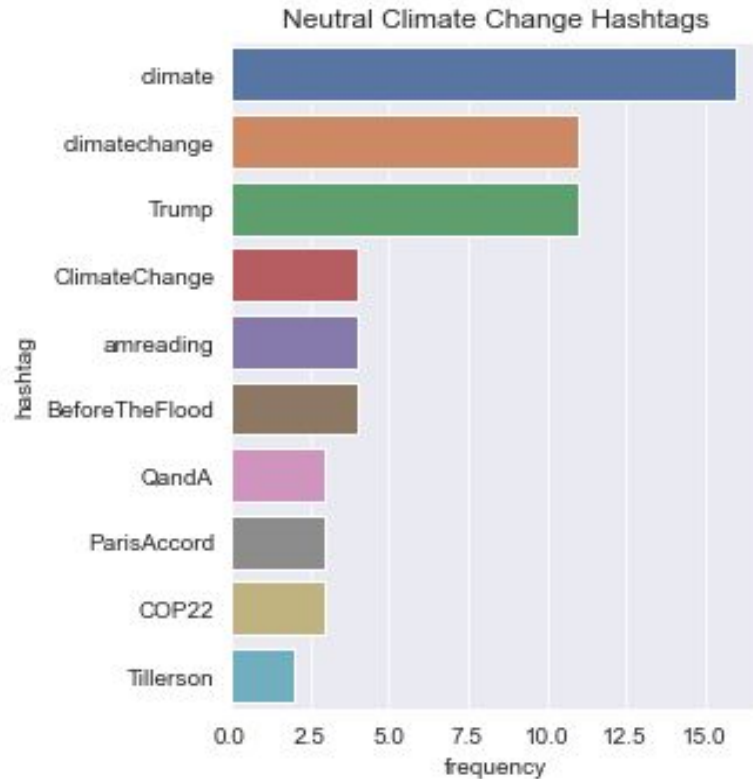
Frequent Hashtags for each Sentiment.



# Exploratory Data Analysis



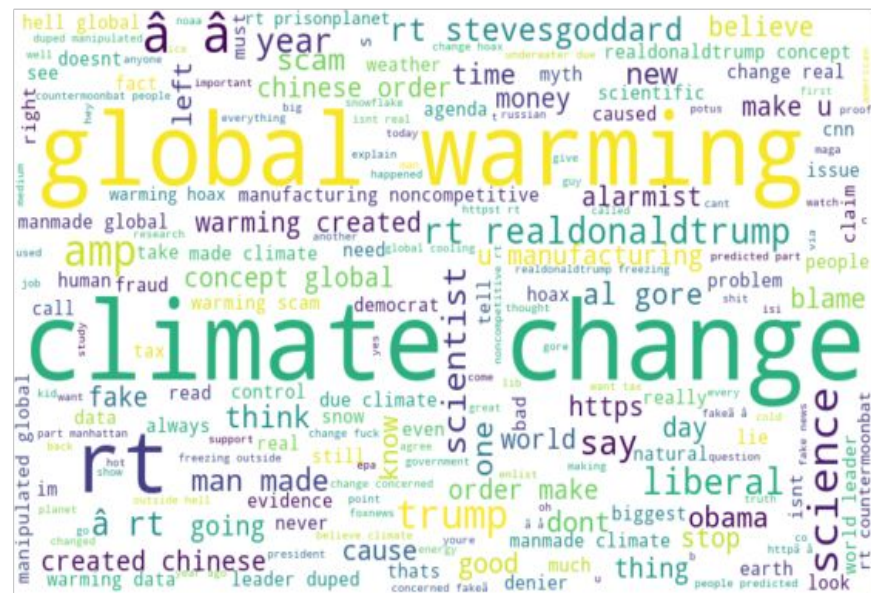
Frequent Hashtags for each Sentiment.



## Exploratory Data Analysis



**Negative Sentiment** →

 **Positive Sentiment**

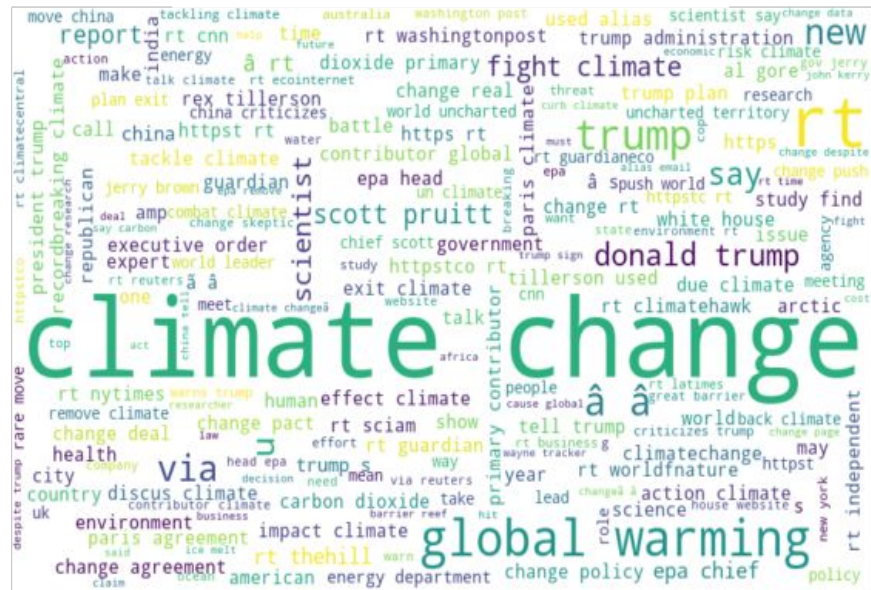


## Exploratory Data Analysis



## News Sentiment

← Neutral Sentiment

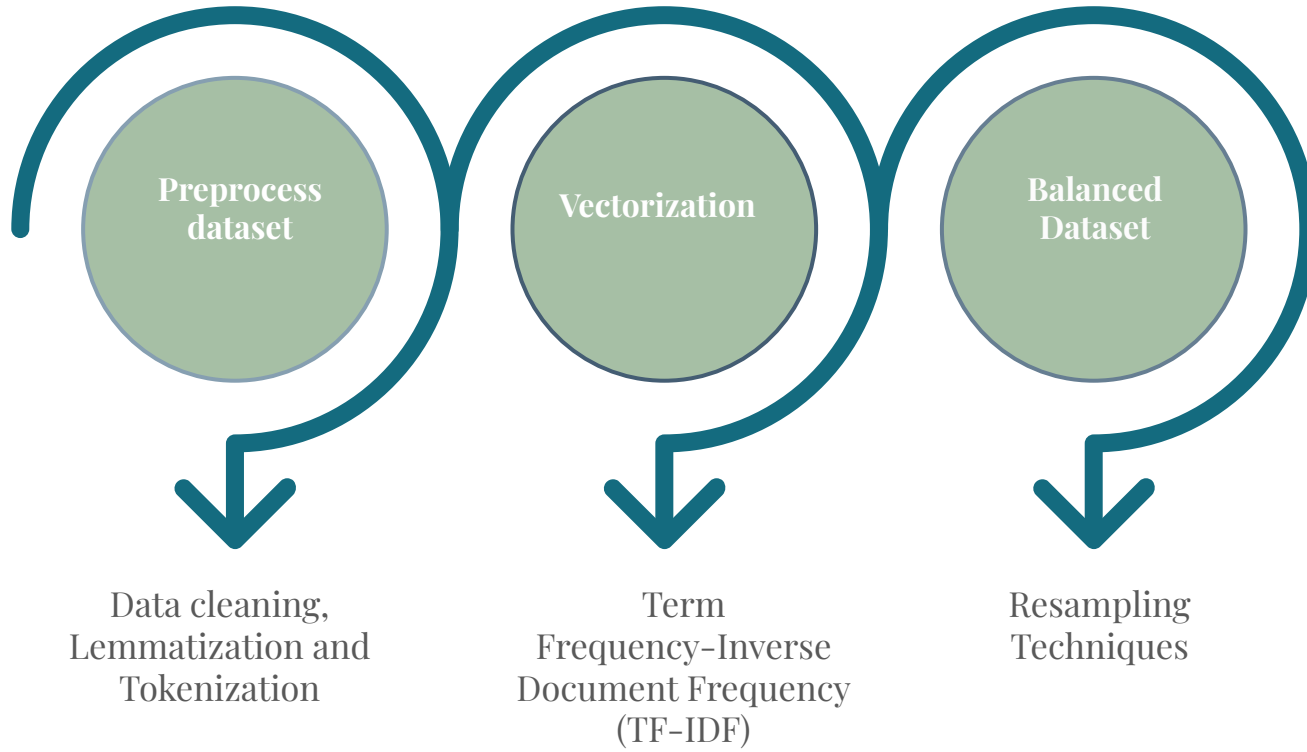




# 04

## Data Preprocessing/ Feature Engineering

## Data Preprocessing and Feature Engineering



# 05

## Model Development

## Model Development

01



SVM Classifier

02



Logistic Regression

03



K-Nearest Neighbours(KNN)

04



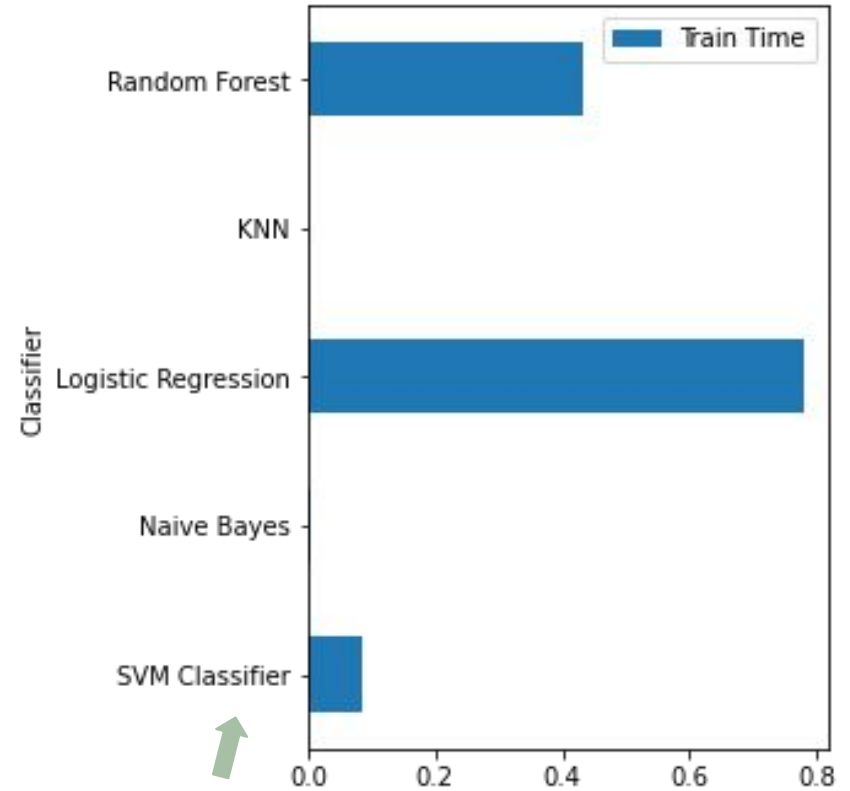
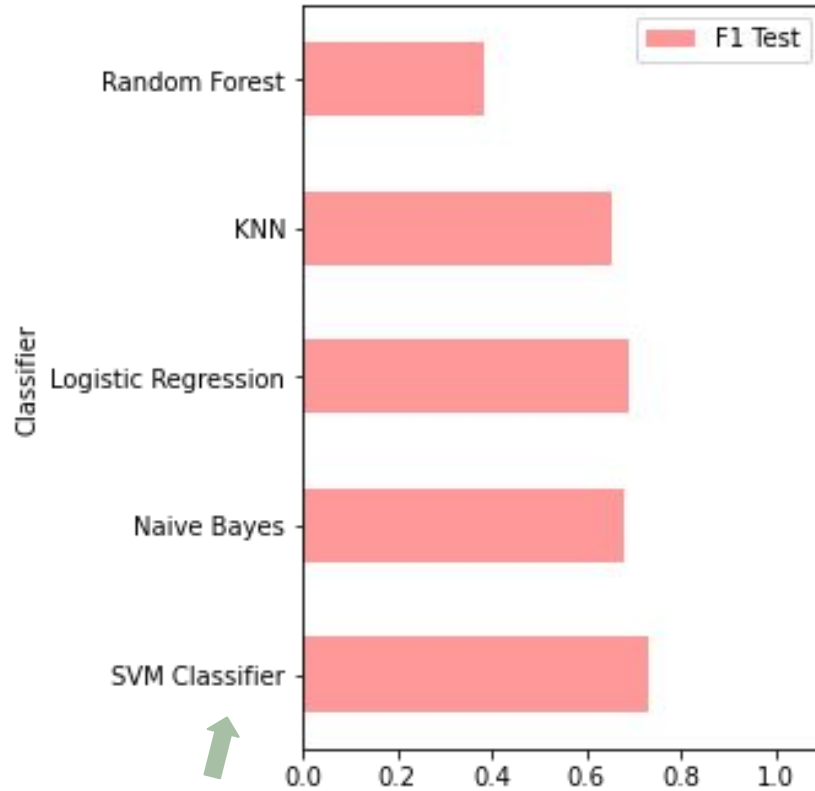
Naive Bayes

05



Random Forest

# Model Evaluation





# 06

## Conclusion

# Business Values



Instant access to valuable insights.



Cost effective



Wide range of demographics





## Conclusion

- Capable of gauging people's sentiments from tweets.
- Governments, Environmental Activists, Pro-Climate Non-Profit Organizations etc.



*“There is no question that climate change is happening; the only arguable point is what part humans are playing in it.”*

**- David Attenborough**

# Thank You

