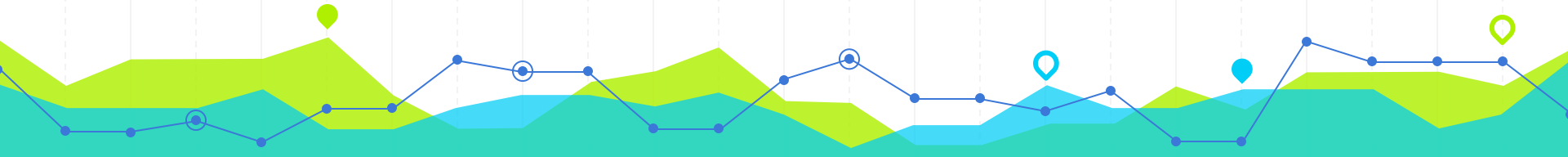# Trend Analysis in Aerospace Industry
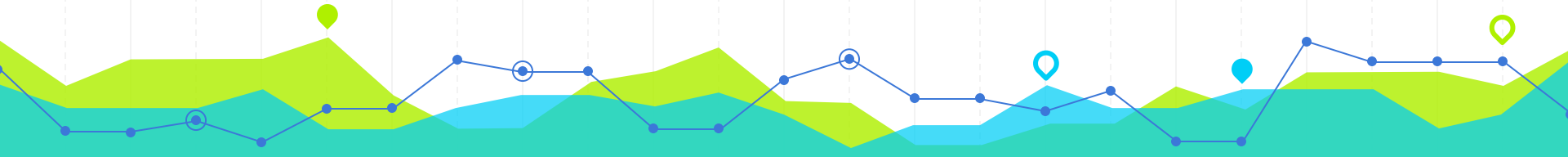
HELLO!

I am Goutham Kannan

I am here to present my project,
Trend Analysis in Aerospace Industry
A2031163

Problem Statement

- Find and depict the trending technology segments in the field of Aerospace and Aviation by using the Twitter data.
- Finding Trends is not simple as identifying the *#trending_words.*

Approach

Military and Defence

Data Collection

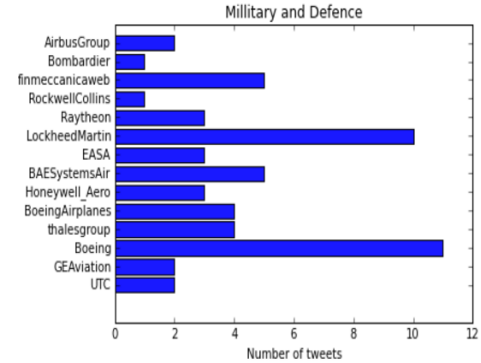Collected the tweets from Top Aviation companies and regulators

Labelling Data

Mannually label the tweets into few categories, viz.
1. Safety.
2. Cost Efficiency.
3. Millitary.
4. Drones
5. Aircraft Systems.
6. Carrer oppurtunities

Predict Class

Using the labeled data , we fit in a model , sklearn's LogisticRegression() is used as the classifier. The labels for the rest of the data is predicted.

The Trend Graph is ploted,using the predicted data.

A graph is plotted for every class using the number of tweets per twitter handle classsified under that class.

Data Collection

Collected Data from Twitter handles of 17 Aerospace companies/Agencies.

Collected public Data using User_Timeline field , which collects 3200 tweets per handle at the rate of 300 tweets per request.

https://dev.twitter.com/rest/reference/get/statuses/user_timeline

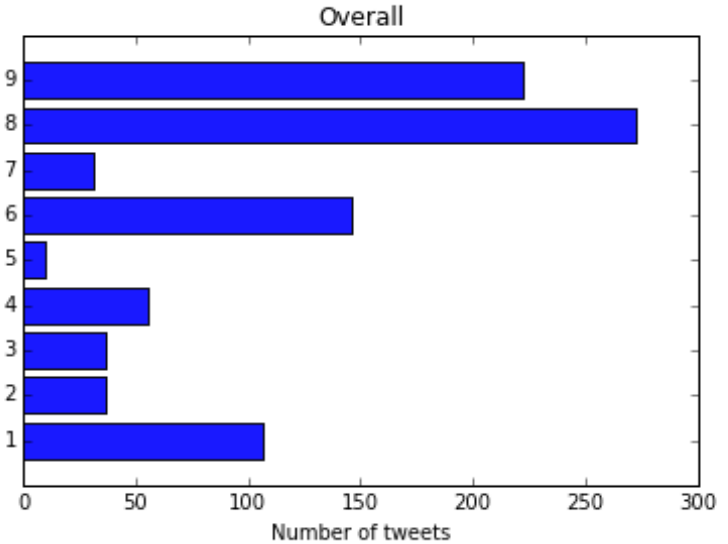Some of the tweets, that are not in English are omitted.

Results

For a Test dataset of 918 tweets,(i.e) lastet 54 tweets from every handle, the classifier was able to predict with an accuracy of 60%.

👍   As the aircrafts contain many systems,the probablity of a tweet being labeled as Aircraft System is high.

Any global event has high impact on the classification , Training data has tweets about Paris Aero Expo, under marketing category, So condolance tweets regrading the Paris attacks got classified as marketing.

Overall

Class 1 : Accidents and Safety
Class 2 : Careers
Class 3 : Cost/Money
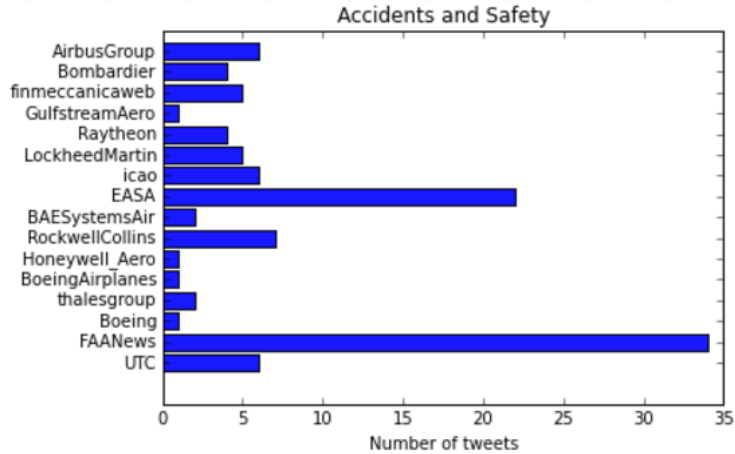Class 4 : Military and Defense
Class 5 : Drones
Class 6 : Marketing
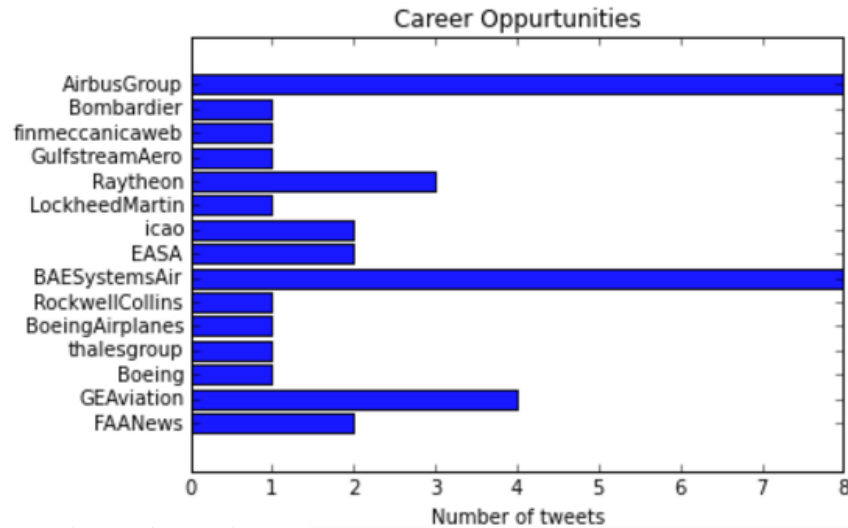Class 7 : Space
Class 8 : Aircraft Hardware Systems
Class 9 : Other

Conclusion

Accidents and Safety

Career Oppurtunities
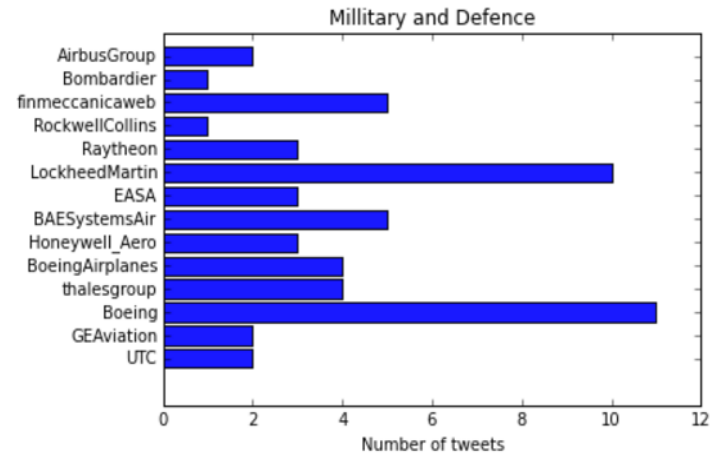

Jobs

Millitary and Defence

Quarterly/Half yearly Analysis of Trend as done in the project can depict the growth of each segments.

Fields like Drones and Space have lesser number tweets, suggests that they are the emerging technologies.

THANKS!

Any questions?