



Statement Classifier

A Multiclass Classification

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Statement Classifier - What we are trying to solve?



Objective

- Classify the statement into the predefined categories and their confidence score

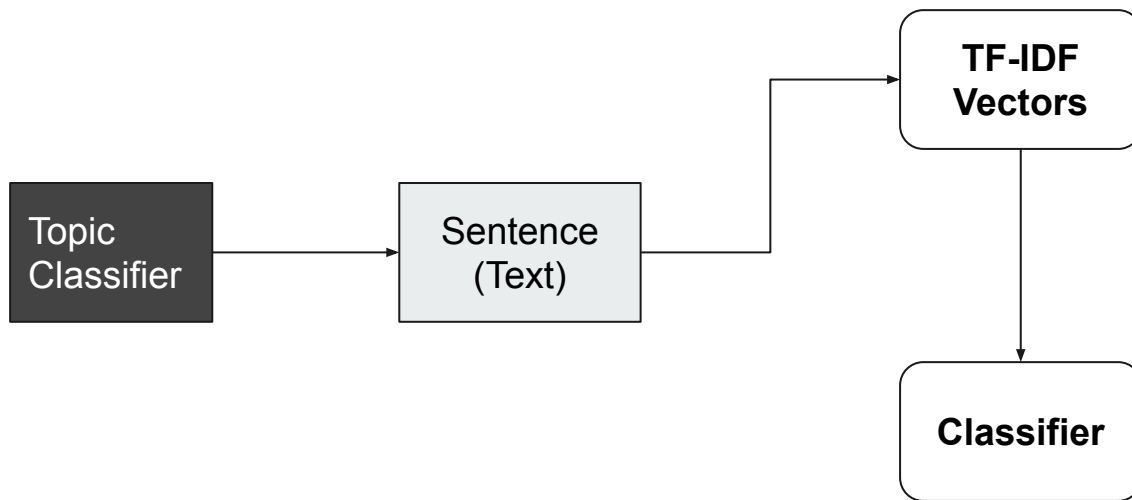


Model

- Classifier Model

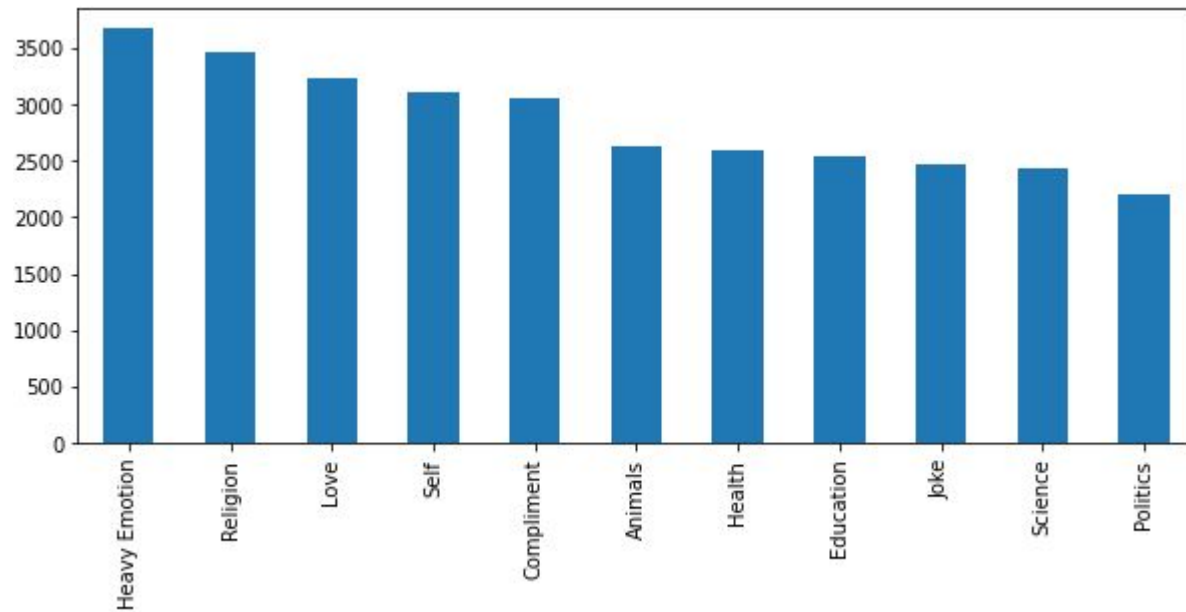


Model Flow





Topic Distribution



Distribution of the topic is not much skewed and hence log is not needed.

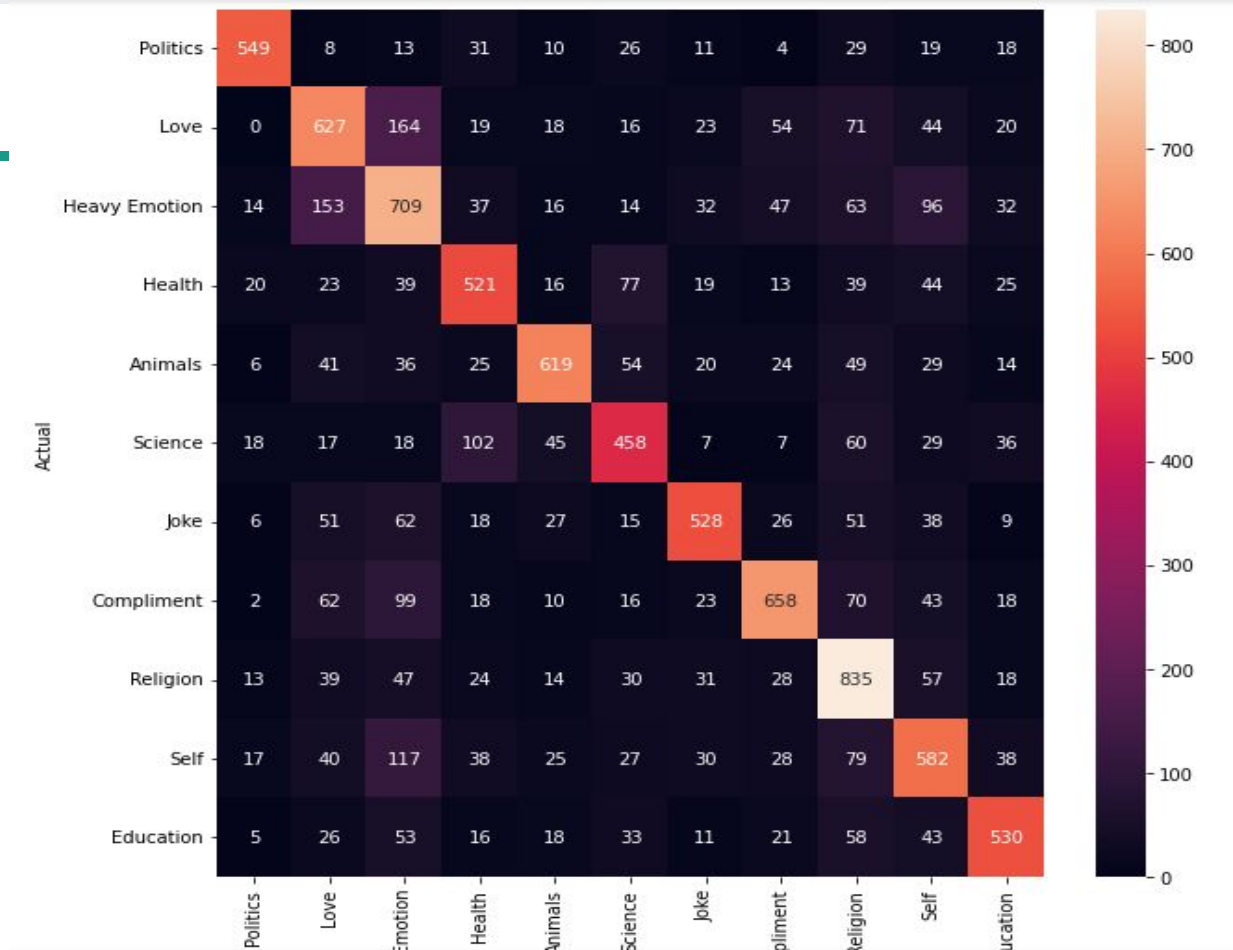


Model Selection Metrics

Model	Accuracy
LogisticRegression	0.54
LinearSVC	0.52
MultinomialNB	0.52
Randomforest	0.29

As this multiclass we are comparing the accuracy for the different models and finding it to train. Logistic Regression out scores all other we are training it with this one

Model Metrics - confusion Matrix in Heat map



Validation Metrics



	Macro Avg	Weighted Avg
Precision	0.63	0.62
Recall	0.62	0.61
F1 Score	0.62	0.61
Accuracy	0.64	

Class	Precision	Recall	F1 Score
Animals	0.63	0.64	0.63
Compliment	0.72	0.66	0.69
Education	0.66	0.55	0.60
Health	0.57	0.58	0.58
Heavy Emotion	0.51	0.56	0.53
Joke	0.68	0.68	0.68
Love	0.60	0.58	0.59
Politics	0.82	0.77	0.80
Religion	0.71	0.69	0.70
Science	0.57	0.52	0.55
Self	0.45	0.55	0.49