

Binary Classification Using Bag of Words based on Raw Counts

Gaussian NB :

	precision	recall	f1-score	support
0	0.79	0.26	0.39	754
1	0.30	0.82	0.43	287
accuracy			0.41	1041
macro avg	0.54	0.54	0.41	1041
weighted avg	0.65	0.41	0.40	1041

SVM :

	precision	recall	f1-score	support
0	0.72	1.00	0.84	754
1	0.00	0.00	0.00	287
accuracy			0.72	1041
macro avg	0.36	0.50	0.42	1041
weighted avg	0.52	0.72	0.61	1041

Logistic Regression:

	precision	recall	f1-score	support
0	0.72	1.00	0.84	754
1	0.00	0.00	0.00	287
accuracy			0.72	1041
macro avg	0.36	0.50	0.42	1041
weighted avg	0.52	0.72	0.61	1041

Perceptron :

	precision	recall	f1-score	support
0	0.73	0.92	0.82	754
1	0.36	0.12	0.18	287
accuracy			0.70	1041
macro avg	0.55	0.52	0.50	1041
weighted avg	0.63	0.70	0.64	1041

Random Forest:

	precision	recall	f1-score	support
0	0.72	1.00	0.84	754
1	0.00	0.00	0.00	287
accuracy			0.72	1041
macro avg	0.36	0.50	0.42	1041
weighted avg	0.52	0.72	0.61	1041

Binary Classification Using Bag of Words based on TFIDF:

Gaussian NB:

	precision	recall	f1-score	support
0	0.79	0.26	0.39	754
1	0.29	0.82	0.43	287
accuracy			0.41	1041
macro avg	0.54	0.54	0.41	1041
weighted avg	0.65	0.41	0.40	1041

Logistic Regression:

	precision	recall	f1-score	support
0	0.72	1.00	0.84	754
1	0.00	0.00	0.00	287
accuracy			0.72	1041
macro avg	0.36	0.50	0.42	1041
weighted avg	0.52	0.72	0.61	1041

Random Forest:

	precision	recall	f1-score	support
0	0.72	1.00	0.84	754
1	1.00	0.00	0.01	287
accuracy			0.73	1041
macro avg	0.86	0.50	0.42	1041
weighted avg	0.80	0.73	0.61	1041

SVM:

	precision	recall	f1-score	support
0	0.72	1.00	0.84	754
1	0.00	0.00	0.00	287
accuracy			0.72	1041
macro avg	0.36	0.50	0.42	1041
weighted avg	0.52	0.72	0.61	1041

Perceptron

	precision	recall	f1-score	support
0	0.73	0.91	0.81	754
1	0.35	0.13	0.19	287
accuracy			0.69	1041
macro avg	0.54	0.52	0.50	1041
weighted avg	0.63	0.69	0.64	1041

Multi-class Classification Using Bag of Words based on Raw Counts

Multinomial NB :

	precision	recall	f1-score	support
1	0.00	0.00	0.00	44
0	0.68	0.99	0.80	177
3	0.00	0.00	0.00	23
5	0.00	0.00	0.00	1
4	0.00	0.00	0.00	4
2	0.00	0.00	0.00	12
accuracy			0.67	261
macro avg	0.11	0.16	0.13	261
weighted avg	0.46	0.67	0.54	261

Logistic Regression:

	precision	recall	f1-score	support
1	0.00	0.00	0.00	44
0	0.68	1.00	0.81	177
3	0.00	0.00	0.00	23
5	0.00	0.00	0.00	1
4	0.00	0.00	0.00	4
2	0.00	0.00	0.00	12
accuracy			0.68	261
macro avg	0.11	0.17	0.13	261
weighted avg	0.46	0.68	0.55	261

SVM

	precision	recall	f1-score	support
1	0.00	0.00	0.00	44
0	0.68	1.00	0.81	177
3	0.00	0.00	0.00	23
5	0.00	0.00	0.00	1
4	0.00	0.00	0.00	4
2	0.00	0.00	0.00	12
accuracy			0.68	261
macro avg	0.11	0.17	0.13	261
weighted avg	0.46	0.68	0.55	261

Random Forest

	precision	recall	f1-score	support
1	0.00	0.00	0.00	44
0	0.68	1.00	0.81	177
3	0.00	0.00	0.00	23
5	0.00	0.00	0.00	1
4	0.00	0.00	0.00	4
2	0.00	0.00	0.00	12
accuracy			0.68	261
macro avg	0.11	0.17	0.13	261
weighted avg	0.46	0.68	0.55	261

Perceptron :

	precision	recall	f1-score	support
1	0.33	0.05	0.08	44
0	0.68	0.95	0.79	177
3	0.00	0.00	0.00	23
5	0.00	0.00	0.00	1
4	0.00	0.00	0.00	4
2	0.00	0.00	0.00	12
accuracy			0.65	261
macro avg	0.17	0.17	0.15	261
weighted avg	0.52	0.65	0.55	261

Multi-class Classification using Bag of Words based on TDIDF Counts**Naïve Bayes :**

	precision	recall	f1-score	support
1	0.00	0.00	0.00	44
0	0.68	1.00	0.81	177
3	0.00	0.00	0.00	23
5	0.00	0.00	0.00	1
4	0.00	0.00	0.00	4
2	0.00	0.00	0.00	12
accuracy			0.68	261
macro avg	0.11	0.17	0.13	261
weighted avg	0.46	0.68	0.55	261

Logistic Regression :

	precision	recall	f1-score	support
1	0.00	0.00	0.00	44
0	0.68	1.00	0.81	177
3	0.00	0.00	0.00	23
5	0.00	0.00	0.00	1
4	0.00	0.00	0.00	4
2	0.00	0.00	0.00	12
accuracy			0.68	261
macro avg	0.11	0.17	0.13	261
weighted avg	0.46	0.68	0.55	261

SVM :

	precision	recall	f1-score	support
1	0.00	0.00	0.00	44
0	0.68	1.00	0.81	177
3	0.00	0.00	0.00	23
5	0.00	0.00	0.00	1
4	0.00	0.00	0.00	4
2	0.00	0.00	0.00	12
accuracy			0.68	261
macro avg	0.11	0.17	0.13	261
weighted avg	0.46	0.68	0.55	261

Random Forest :

	precision	recall	f1-score	support
1	0.00	0.00	0.00	44
0	0.68	1.00	0.81	177
3	0.00	0.00	0.00	23
5	0.00	0.00	0.00	1
4	0.00	0.00	0.00	4
2	0.00	0.00	0.00	12
accuracy			0.68	261
macro avg	0.11	0.17	0.13	261
weighted avg	0.46	0.68	0.55	261

Perceptron :

	precision	recall	f1-score	support
1	0.17	0.02	0.04	44
0	0.67	0.94	0.79	177
3	0.00	0.00	0.00	23
5	0.00	0.00	0.00	1
4	0.00	0.00	0.00	4
2	0.00	0.00	0.00	12
accuracy			0.64	261
macro avg	0.14	0.16	0.14	261
weighted avg	0.48	0.64	0.54	261