Logistic_Regression

October 10, 2024

Score:	68.16%
Execution Time:	10.107s
BigData Fraction:	5.0%
Cohen's kappa:	45.86%
Roc AUC:	0.842
Analyser:	word
Analyser:	tfidf
Train Proprotion:	5.0%
Ngrans:	[1, 2]
FreqThreshold:	0
StopWord:	True
OutTogether:	True

	precision	recall	f1-score	support
Negative	0.628	0.752	0.684	36049.0
Neutral	0.305	0.483	0.374	15285.0
Positive	0.856	0.688	0.763	81757.0
Accuracy			0.682	133091.0
Macro avg	0.596	0.641	0.607	133091.0
Weighted avg	0.731	0.682	0.697	133091.0
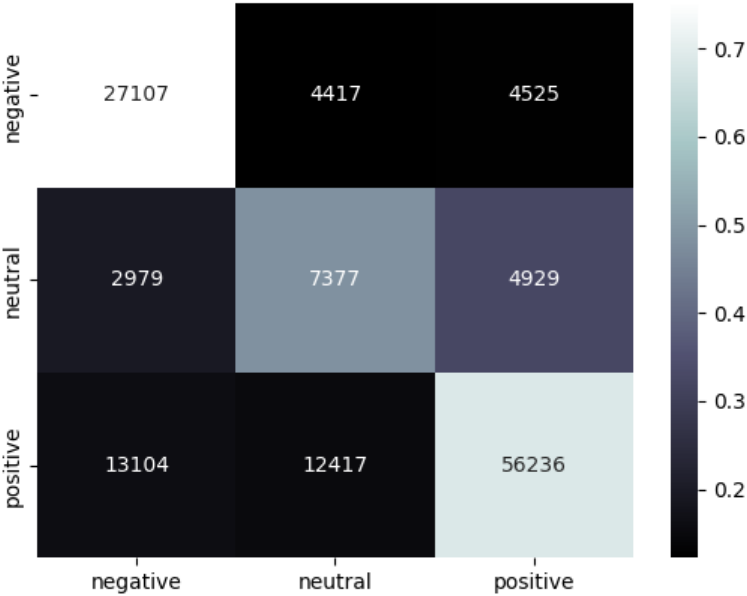
Index	F1	AUC
negative	0.684	0.743
neutral	0.374	0.307
positive	0.763	0.892

Logistic_Regression
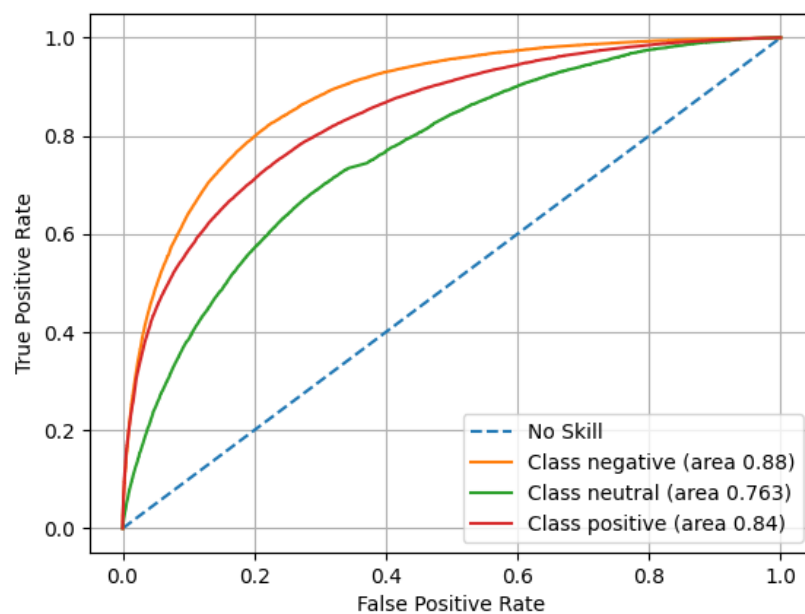
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Figure 1: Roc_auc_curve
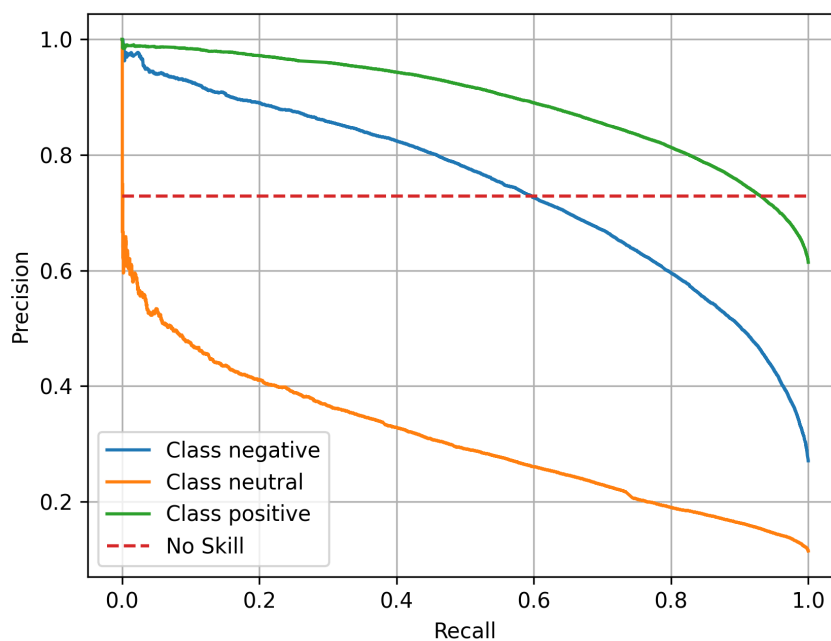
Figure 2: Precision_recall_curve

Svm_Svc

October 10, 2024

Score:	72.36%
Execution Time:	949.536s
BigData Fraction:	5.0%
Cohen's kappa:	49.26%
Roc AUC:	0.849
Analyser:	word
Analyser:	tfidf
Train Proprotion:	5.0%
Ngrans:	[1, 2]
FreqThreshold:	0
StopWord:	True
OutTogether:	True

	precision	recall	f1-score	support
Negative	0.621	0.79	0.695	36049.0
Neutral	0.4	0.285	0.333	15285.0
Positive	0.831	0.776	0.803	81757.0
Accuracy			0.724	133091.0
Macro avg	0.617	0.617	0.61	133091.0
Weighted avg	0.725	0.724	0.72	133091.0
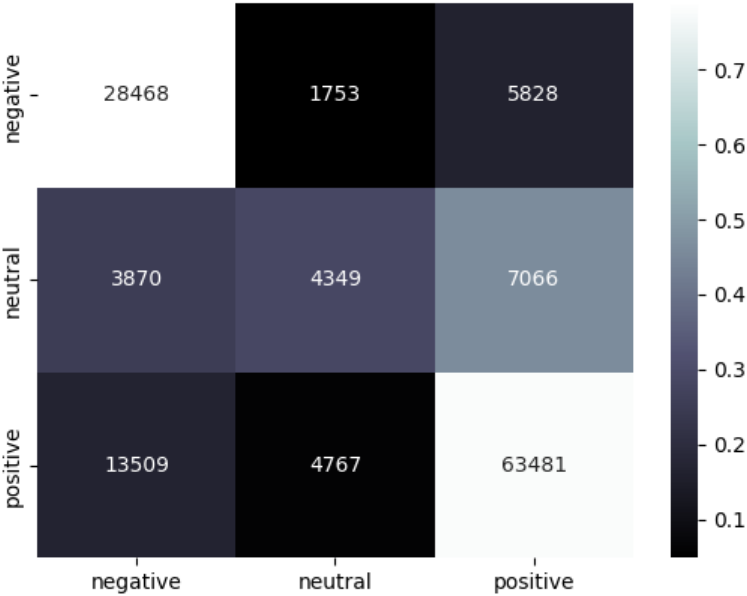
Index	F1	AUC
negative	0.683	0.749
neutral	0.199	0.306
positive	0.822	0.895
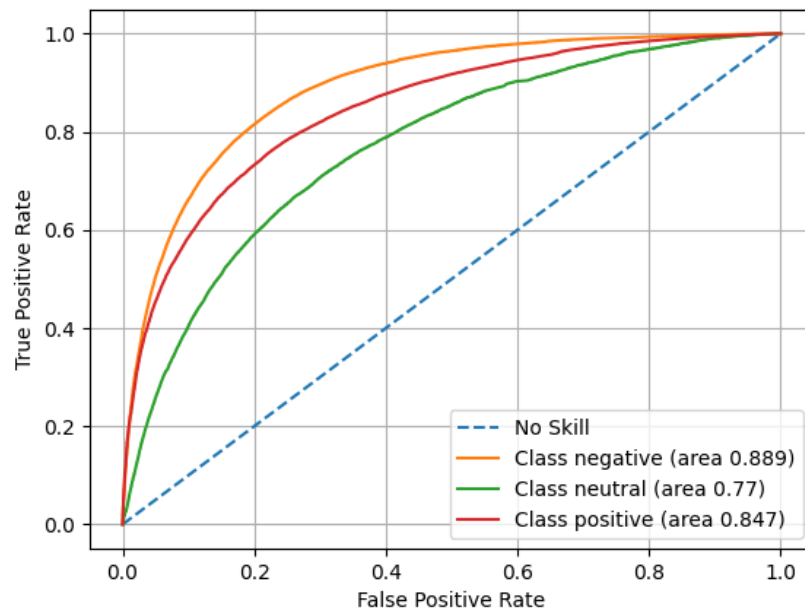
Figure 3: Roc_auc_curve
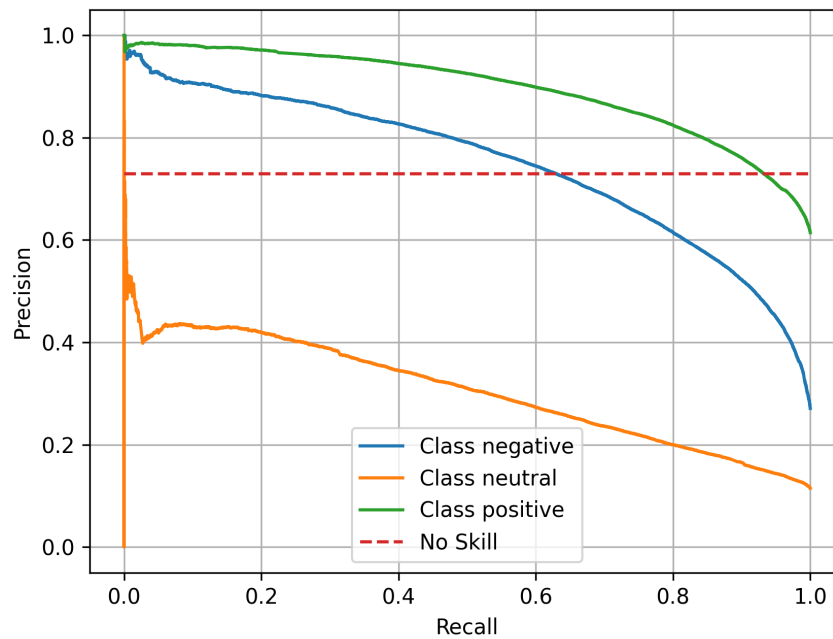
Figure 4: Precision_recall_curve

Kneighbors_Classifier

October 10, 2024

Score:	64.32%
Execution Time:	0.002s
BigData Fraction:	5.0%
Cohen's kappa:	11.37%
Roc AUC:	0.795
Analyser:	word
Analyser:	tfidf
Train Proprotion:	5.0%
Ngrans:	[1, 2]
FreqThreshold:	0
StopWord:	True
OutTogether:	True

	precision	recall	f1-score	support
Negative	0.815	0.128	0.221	36049.0
Neutral	0.423	0.017	0.032	15285.0
Positive	0.637	0.988	0.774	81757.0
Accuracy			0.643	133091.0
Macro avg	0.625	0.377	0.342	133091.0
Weighted avg	0.661	0.643	0.539	133091.0
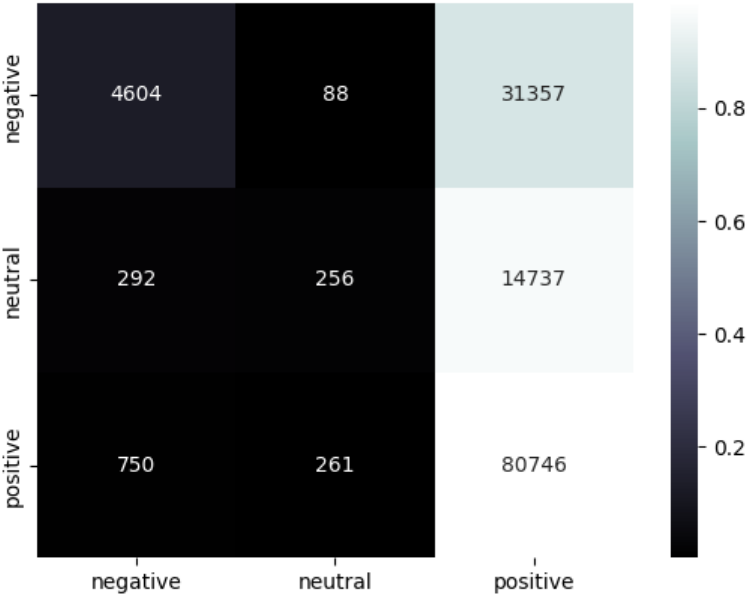
Index	F1	AUC
negative	0.221	0.664
neutral	0.032	0.238
positive	0.774	0.859

Kneighbors_Classifier
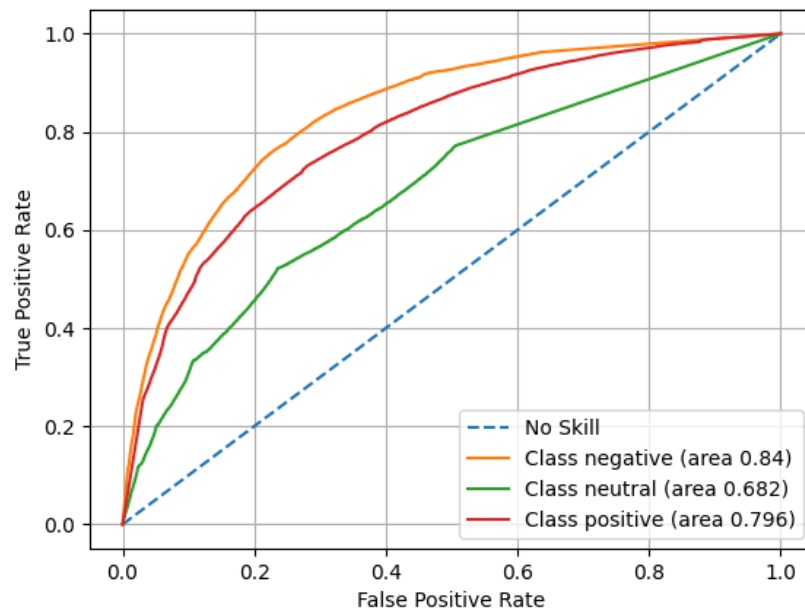
October 10, 2024

Figure 5: Roc_auc_curve
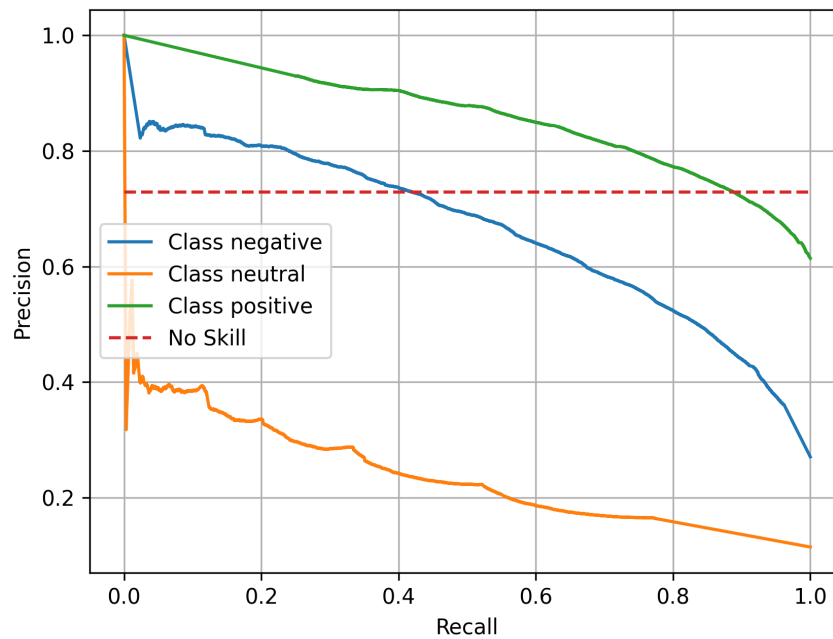
Figure 6: Precision_recall_curve

Random_Forest

October 10, 2024

Score:	73.27%
Execution Time:	202.786s
BigData Fraction:	5.0%
Cohen's kappa:	44.72%
Roc AUC:	0.82
Analyser:	word
Analyser:	tfidf
Train Proprotion:	5.0%
Ngrans:	[1, 2]
FreqThreshold:	0
StopWord:	True
OutTogether:	True

	precision	recall	f1-score	support
Negative	0.686	0.643	0.664	36049.0
Neutral	0.581	0.109	0.183	15285.0
Positive	0.753	0.889	0.816	81757.0
Accuracy			0.733	133091.0
Macro avg	0.674	0.547	0.554	133091.0
Weighted avg	0.715	0.733	0.702	133091.0
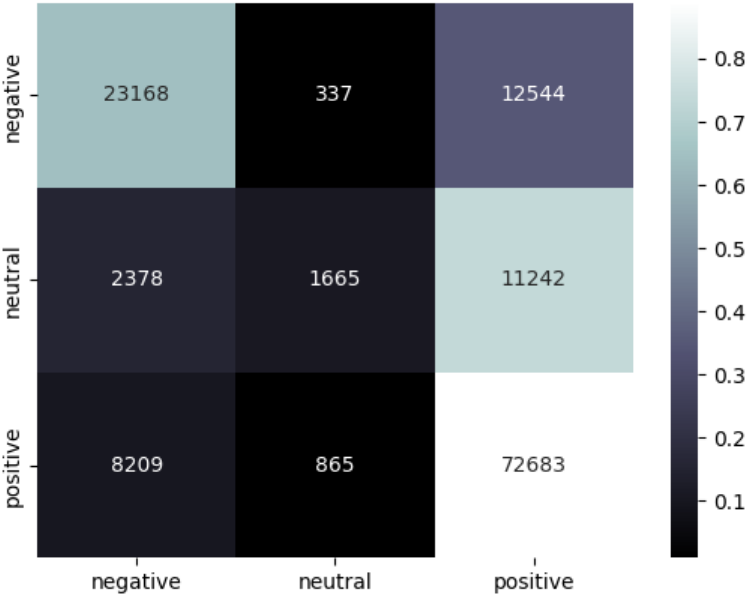
Index	F1	AUC
negative	0.664	0.723
neutral	0.183	0.307
positive	0.816	0.854

Figure 7: Roc_auc_curve

Figure 8: Precision_recall_curve

SGD_Classifier

October 10, 2024

Score:	71.94%
Execution Time:	3.306s
BigData Fraction:	5.0%
Cohen's kappa:	47.48%
Roc AUC:	0.835
Analyser:	word
Analyser:	tfidf
Train Proprotion:	5.0%
Ngrans:	[1, 2]
FreqThreshold:	0
StopWord:	True
OutTogether:	True

	precision	recall	f1-score	support
Negative	0.654	0.705	0.678	36049.0
Neutral	0.358	0.302	0.327	15285.0
Positive	0.808	0.804	0.806	81757.0
Accuracy			0.719	133091.0
Macro avg	0.607	0.603	0.604	133091.0
Weighted avg	0.714	0.719	0.716	133091.0
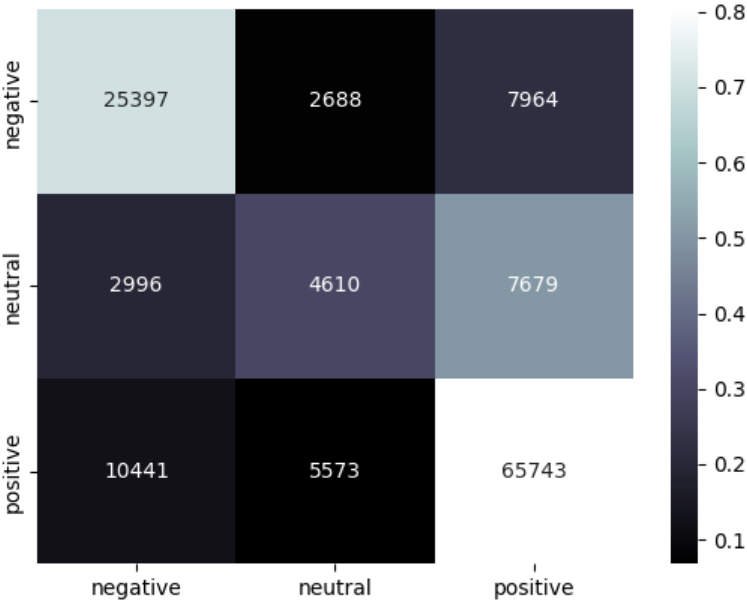
Index	F1	AUC
negative	0.678	0.738
neutral	0.327	0.294
positive	0.806	0.887
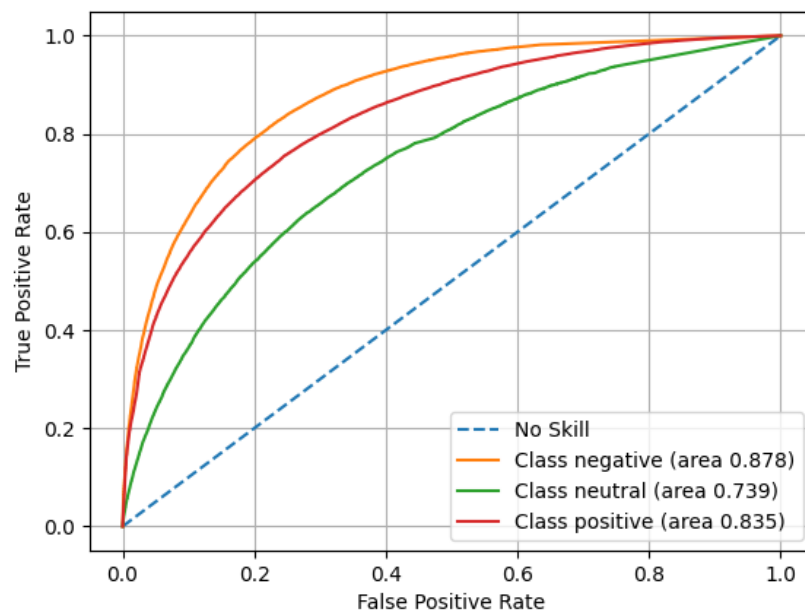
Figure 9: Roc_auc_curve
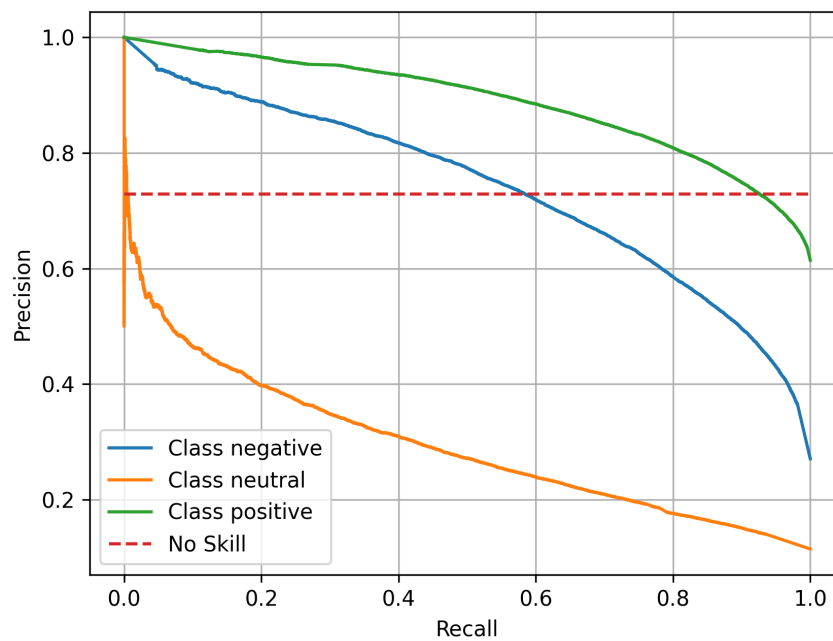
Figure 10: Precision_recall_curve

Gradient_Boosting

October 10, 2024

Score:	69.86%
Execution Time:	112.746s
BigData Fraction:	5.0%
Cohen's kappa:	33.52%
Roc AUC:	0.803
Analyser:	word
Analyser:	tfidf
Train Proprotion:	5.0%
Ngrans:	[1, 2]
FreqThreshold:	0
StopWord:	True
OutTogether:	True

	precision	recall	f1-score	support
Negative	0.672	0.457	0.544	36049.0
Neutral	0.667	0.052	0.096	15285.0
Positive	0.705	0.926	0.801	81757.0
Accuracy			0.699	133091.0
Macro avg	0.681	0.478	0.48	133091.0
Weighted avg	0.692	0.699	0.65	133091.0
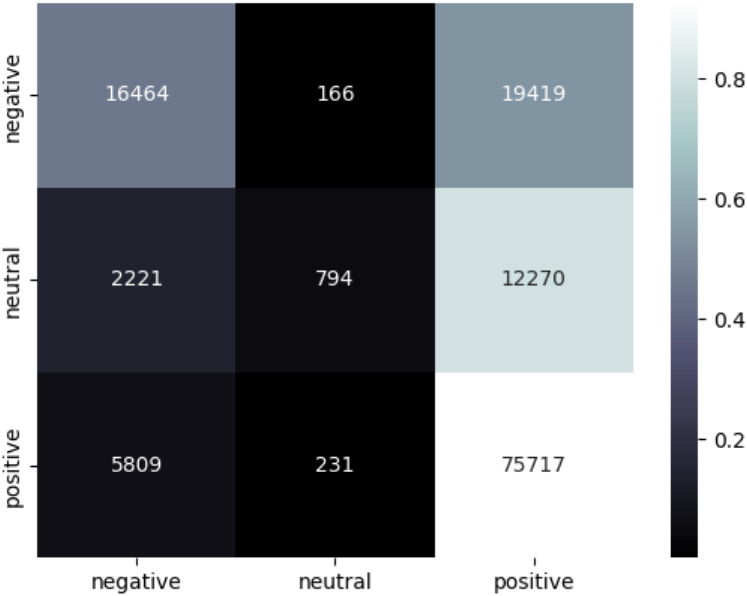
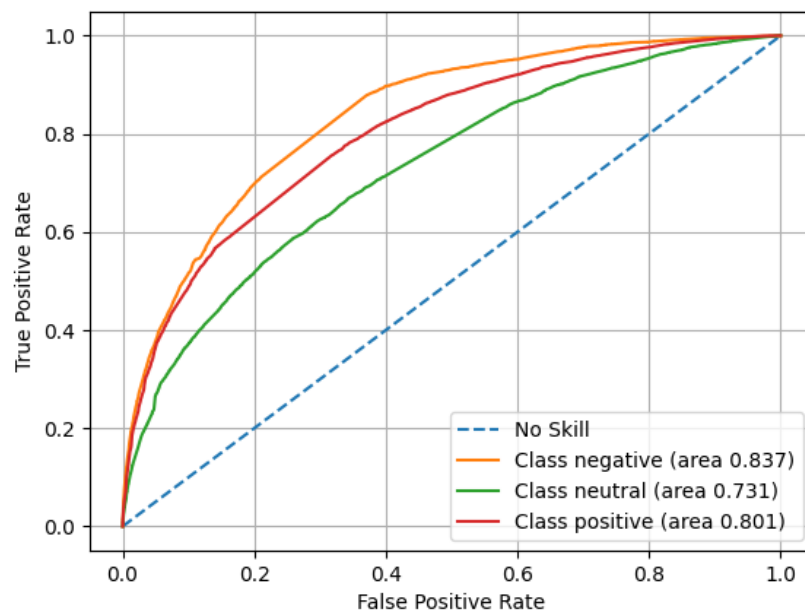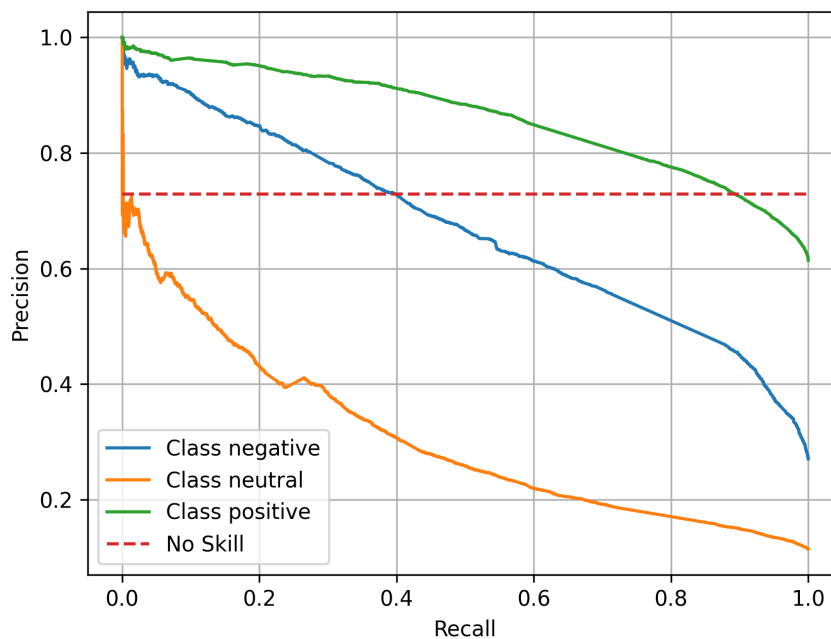| Index	F1	AUC
negative	0.544	0.669
neutral	0.096	0.306
positive	0.801	0.862

Figure 11: Roc_auc_curve

Figure 12: Precision_recall_curve