

80% training/20% testing						50% training/50% testing						Delta (new-old)			
Score for Emotion	0.437550925					Score for Emotion	0.449225934					0.011675			
Accuracy for Emotion	0.437550925					Accuracy for Emotion	0.449225934					0.011675			
Precision (Weighted) for Emotion	0.485135331					Precision (Weighted) for Emotion	0.490750903					0.005616			
F1 Score (Weighted) for Emotion	0.370297213					F1 Score (Weighted) for Emotion	0.3901304					0.019833			
F1 Score (Macro) for Emotion	0.223413218					F1 Score (Macro) for Emotion	0.249161233					0.025748			
	precision	recall	f1-score	support		precision	recall	f1-score	support		precision	recall	f1-score		
	0	0.54	0.53	0.54	2102	0	0.53	0.53	0.53	5242	-0.01	0	-0.01		
	1	0.63	0.37	0.46	1233	1	0.61	0.42	0.49	3057	-0.02	0.05	0.03		
	2	0.49	0.19	0.27	1011	2	0.55	0.23	0.32	2661	0.06	0.04	0.05		
	3	0.42	0.14	0.21	1710	3	0.43	0.17	0.25	4173	0.01	0.03	0.04		
	4	0.44	0.17	0.24	2290	4	0.45	0.18	0.26	5731	0.01	0.01	0.02		
	5	0.54	0.12	0.2	721	5	0.45	0.13	0.21	1762	-0.09	0.01	0.01		
	6	0.52	0.09	0.16	944	6	0.56	0.13	0.22	2493	0.04	0.04	0.06		
	7	0.56	0.16	0.24	1174	7	0.55	0.18	0.27	2985	-0.01	0.02	0.03		
	8	0.55	0.05	0.1	387	8	0.55	0.07	0.13	1065	0	0.02	0.03		
	9	0.52	0.08	0.14	928	9	0.51	0.1	0.16	2366	-0.01	0.02	0.02		
	10	0.48	0.15	0.23	1550	10	0.46	0.18	0.25	3717	-0.02	0.03	0.02		
	11	0.56	0.1	0.17	590	11	0.55	0.14	0.22	1437	-0.01	0.04	0.05		
	12	0.5	0.02	0.04	265	12	0.61	0.03	0.05	699	0.11	0.01	0.01		
	13	0.45	0.05	0.08	589	13	0.52	0.08	0.14	1512	0.07	0.03	0.06		
	14	0.74	0.08	0.14	344	14	0.71	0.09	0.17	896	-0.03	0.01	0.03		
	15	0.79	0.72	0.75	1423	15	0.77	0.74	0.76	3551	-0.02	0.02	0.01		
	16	0	0	0	68	16	0	0	0	183	0	0	0		
	17	0.53	0.18	0.26	866	17	0.5	0.19	0.28	2152	-0.03	0.01	0.02		
	18	0.71	0.41	0.52	1001	18	0.69	0.47	0.56	2501	-0.02	0.06	0.04		
	19	0	0	0	185	19	0.5	0	0.01	392	0.5	0	0.01		
	20	0.39	0.89	0.54	11042	20	0.4	0.87	0.55	27584	0.01	-0.02	0.01		
	21	0.58	0.18	0.28	955	21	0.58	0.22	0.32	2294	0	0.04	0.04		
	22	0	0	0	120	22	0	0	0	323	0	0	0		
	23	0.54	0.07	0.12	986	23	0.46	0.09	0.15	2320	-0.08	0.02	0.03		
	24	0	0	0	157	24	0.17	0	0.01	383	0.17	0	0.01		
	25	0.53	0.08	0.13	302	25	0.63	0.1	0.18	773	0.1	0.02	0.05		
	26	0.56	0.13	0.22	758	26	0.55	0.16	0.25	1911	-0.01	0.03	0.03		
	27	0.49	0.12	0.19	663	27	0.55	0.16	0.25	1747	0.06	0.04	0.06		
accuracy				0.44	34364	accuracy			0.45	85910				0.01	
macro avg	0.47	0.18	0.22	34364		macro avg	0.49	0.2	0.25	85910	0.02	0.02	0.03		
weighted avg	0.49	0.44	0.37	34364		weighted avg	0.49	0.45	0.39	85910	0	0.01	0.02		
Score for Sentiment	0.606070306					Score for Sentiment	0.614759632					0.008689			
Accuracy for Emotion	0.606070306					Accuracy for Emotion	0.614759632					0.008689			
Precision (Weighted) for Emotion	0.600581792					Precision (Weighted) for Emotion	0.609513349					0.008932			
F1 Score (Weighted) for Emotion	0.599332604					F1 Score (Weighted) for Emotion	0.608632921					0.0093			
F1 Score (Macro) for Emotion	0.563918432					F1 Score (Macro) for Emotion	0.575957613					0.012039			
	precision	recall	f1-score	support		precision	recall	f1-score	support						
	0	0.53	0.32	0.4	3767	0	0.54	0.34	0.42	9545	0.01	0.02	0.02		
	1	0.6	0.59	0.59	7711	1	0.61	0.61	0.61	19208	0.01	0.02	0.02		
	2	0.56	0.57	0.56	11042	2	0.57	0.57	0.57	27584	0.01	0	0.01		
	3	0.66	0.75	0.7	11844	3	0.66	0.75	0.7	29573	0	0	0		
				0.61	34364				0.61	85910				0	
macro avg	0.59	0.55	0.56	34364		macro avg	0.6	0.57	0.58	85910	0.01	0.02	0.02		
weighted avg	0.6	0.61	0.6	34364		weighted avg	0.61	0.61	0.61	85910	0.01	0	0.01		

support

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226
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1153
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[REDACTED]

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80% training/20% testing					50% training/50% testing											
Score for Emotion	0.596438133				Score for Emotion	0.621534164				Delta (new-old)	0.025096					
Accuracy for Emotion	0.596438133				Accuracy for Emotion	0.621534164					0.025096					
Precision (Weighted) for Emotion	0.613522205				Precision (Weighted) for Emotion	0.632473884					0.018952					
F1 Score (Weighted) for Emotion	0.592999113				F1 Score (Weighted) for Emotion	0.616308677					0.02331					
F1 Score (Macro) for Emotion	0.512459252				F1 Score (Macro) for Emotion	0.539113605					0.026654					
	precision	recall	f1-score	support		precision	recall	f1-score	support		precision	recall	f1-score	support		
	0	0.57	0.82	0.67	2102		0	0.58	0.82	0.68	5242		0.01	0	0.01	3140
	1	0.58	0.82	0.68	1233		1	0.59	0.83	0.69	3057		0.01	0.01	0.01	1824
	2	0.44	0.7	0.54	1011		2	0.48	0.71	0.57	2661		0.04	0.01	0.03	1650
	3	0.41	0.58	0.48	1710		3	0.43	0.58	0.5	4173		0.02	0	0.02	2463
	4	0.47	0.56	0.51	2290		4	0.49	0.54	0.52	5731		0.02	-0.02	0.01	3441
	5	0.48	0.55	0.51	721		5	0.49	0.58	0.53	1762		0.01	0.03	0.02	1041
	6	0.48	0.58	0.52	944		6	0.52	0.56	0.54	2493		0.04	-0.02	0.02	1549
	7	0.59	0.63	0.61	1174		7	0.61	0.61	0.61	2985		0.02	-0.02	0	1811
	8	0.48	0.58	0.52	387		8	0.54	0.55	0.54	1065		0.06	-0.03	0.02	678
	9	0.46	0.48	0.47	928		9	0.49	0.45	0.47	2366		0.03	-0.03	0	1438
	10	0.53	0.49	0.51	1550		10	0.56	0.49	0.53	3717		0.03	0	0.02	2167
	11	0.55	0.42	0.47	590		11	0.6	0.43	0.5	1437		0.05	0.01	0.03	847
	12	0.46	0.38	0.42	265		12	0.58	0.4	0.47	699		0.12	0.02	0.05	434
	13	0.49	0.41	0.44	589		13	0.57	0.41	0.48	1512		0.08	0	0.04	923
	14	0.61	0.56	0.58	344		14	0.67	0.58	0.62	896		0.06	0.02	0.04	552
	15	0.86	0.83	0.84	1423		15	0.88	0.83	0.85	3551		0.02	0	0.01	2128
	16	0.4	0.28	0.33	68		16	0.48	0.36	0.41	183		0.08	0.08	0.08	115
	17	0.6	0.45	0.51	866		17	0.65	0.45	0.53	2152		0.05	0	0.02	1286
	18	0.76	0.7	0.73	1001		18	0.76	0.74	0.75	2501		0	0.04	0.02	1500
	19	0.6	0.27	0.37	185		19	0.64	0.3	0.41	392		0.04	0.03	0.04	207
	20	0.71	0.65	0.68	11042		20	0.71	0.72	0.71	27584		0	0.07	0.03	16542
	21	0.71	0.4	0.51	955		21	0.72	0.42	0.53	2294		0.01	0.02	0.02	1339
	22	0.62	0.17	0.27	120		22	0.63	0.18	0.28	323		0.01	0.01	0.01	203
	23	0.63	0.25	0.35	986		23	0.64	0.25	0.36	2320		0.01	0	0.01	1334
	24	0.6	0.16	0.25	157		24	0.66	0.25	0.36	383		0.06	0.09	0.11	226
	25	0.65	0.48	0.56	302		25	0.7	0.55	0.62	773		0.05	0.07	0.06	471
	26	0.71	0.4	0.51	758		26	0.7	0.4	0.51	1911		-0.01	0	0	1153
	27	0.63	0.39	0.48	663		27	0.69	0.44	0.54	1747		0.06	0.05	0.06	1084
	accuracy			0.6	34364		accuracy			0.62	85910				0.02	51546
	macro avg	0.57	0.5	0.51	34364		macro avg	0.61	0.52	0.54	85910		0.04	0.02	0.03	51546
	weighted avg	0.61	0.6	0.59	34364		weighted avg	0.63	0.62	0.62	85910		0.02	0.02	0.03	51546
Score for Sentiment	0.720230474				Score for Sentiment	0.73947154					0.019241					
Accuracy for Emotion	0.720230474				Accuracy for Emotion	0.73947154					0.019241					
Precision (Weighted) for Emotion	0.730819334				Precision (Weighted) for Emotion	0.746933632					0.016114					
F1 Score (Weighted) for Emotion	0.722443408				F1 Score (Weighted) for Emotion	0.741232869					0.018789					
F1 Score (Macro) for Emotion	0.706697716				F1 Score (Macro) for Emotion	0.725295616					0.018598					
	precision	recall	f1-score	support		precision	recall	f1-score	support							
	0	0.57	0.72	0.63	3767		0	0.6	0.71	0.65	9545		0.03	-0.01	0.02	5778
	1	0.68	0.78	0.72	7711		1	0.7	0.79	0.74	19208		0.02	0.01	0.02	11497
	2	0.71	0.67	0.69	11042		2	0.73	0.7	0.71	27584		0.02	0.03	0.02	16542
	3	0.84	0.73	0.78	11844		3	0.84	0.76	0.8	29573		0	0.03	0.02	17729
	accuracy			0.72	34364		accuracy			0.74	85910				0.02	51546
	macro avg	0.7	0.72	0.71	34364		macro avg	0.72	0.74	0.73	85910		0.02	0.02	0.02	51546
	weighted avg	0.73	0.72	0.72	34364		weighted avg	0.75	0.74	0.74	85910		0.02	0.02	0.02	51546

80% training/20% testing					50% training/50% testing									
Score for Emotion	0.577581				Score for Emotion	0.469293				Delta (new-old)	-0.10829			
Accuracy for Emotion	0.577581				Accuracy for Emotion	0.469293					-0.10829			
Precision (Weighted) for Emotion	0.570543				Precision (Weighted)	0.459024					-0.11152			
F1 Score (Weighted) for Emotion	0.571757				F1 Score (Weighted)	0.423664					-0.14809			
F1 Score (Macro) for Emotion	0.507736				F1 Score (Macro) for	0.318377					-0.18936			
	precision	recall	f1-score	support		precision	recall	f1-score	support		precision	recall	f1-score	support
0	0.62	0.67	0.65	2101	0	0.55	0.52	0.53	5228		-0.07	-0.15	-0.12	3127
1	0.66	0.67	0.67	1255	1	0.57	0.58	0.57	3080		-0.09	-0.09	-0.1	1825
2	0.52	0.51	0.52	1022	2	0.44	0.26	0.33	2565		-0.08	-0.25	-0.19	1543
3	0.45	0.37	0.41	1682	3	0.28	0.15	0.2	4157		-0.17	-0.22	-0.21	2475
4	0.5	0.41	0.45	2208	4	0.34	0.15	0.21	5589		-0.16	-0.26	-0.24	3381
5	0.49	0.46	0.47	691	5	0.34	0.15	0.21	1702		-0.15	-0.31	-0.26	1011
6	0.49	0.45	0.47	986	6	0.41	0.2	0.27	2483		-0.08	-0.25	-0.2	1497
7	0.57	0.48	0.52	1172	7	0.44	0.22	0.3	2893		-0.13	-0.26	-0.22	1721
8	0.48	0.61	0.54	420	8	0.47	0.26	0.34	1077		-0.01	-0.35	-0.2	657
9	0.44	0.36	0.4	990	9	0.36	0.14	0.2	2358		-0.08	-0.22	-0.2	1368
10	0.47	0.47	0.47	1512	10	0.33	0.15	0.21	3771		-0.14	-0.32	-0.26	2259
11	0.5	0.42	0.46	597	11	0.43	0.21	0.28	1485		-0.07	-0.21	-0.18	888
12	0.38	0.39	0.39	289	12	0.49	0.12	0.2	729		0.11	-0.27	-0.19	440
13	0.46	0.42	0.44	594	13	0.37	0.19	0.25	1499		-0.09	-0.23	-0.19	905
14	0.59	0.58	0.58	332	14	0.52	0.28	0.36	899		-0.07	-0.3	-0.22	567
15	0.85	0.82	0.84	1386	15	0.83	0.76	0.79	3559		-0.02	-0.06	-0.05	2173
16	0.44	0.41	0.42	76	16	0.31	0.05	0.08	174		-0.13	-0.36	-0.34	98
17	0.52	0.47	0.49	857	17	0.48	0.3	0.37	2172		-0.04	-0.17	-0.12	1315
18	0.66	0.82	0.73	1047	18	0.66	0.62	0.64	2442		0	-0.2	-0.09	1395
19	0.48	0.4	0.44	170	19	0.54	0.07	0.13	420		0.06	-0.33	-0.31	250
20	0.63	0.7	0.67	11029	20	0.45	0.83	0.58	27769		-0.18	0.13	-0.09	16740
21	0.49	0.53	0.51	921	21	0.56	0.3	0.39	2297		0.07	-0.23	-0.12	1376
22	0.39	0.29	0.33	129	22	0.42	0.06	0.11	358		0.03	-0.23	-0.22	229
23	0.45	0.32	0.38	958	23	0.39	0.07	0.12	2366		-0.06	-0.25	-0.26	1408
24	0.42	0.38	0.39	165	24	0.4	0.09	0.15	419		-0.02	-0.29	-0.24	254
25	0.54	0.59	0.56	312	25	0.52	0.4	0.45	752		-0.02	-0.19	-0.11	440
26	0.51	0.5	0.51	763	26	0.51	0.21	0.3	1921		0	-0.29	-0.21	1158
27	0.56	0.5	0.53	700	27	0.52	0.26	0.35	1746		-0.04	-0.24	-0.18	1046
accuracy					accuracy			0.47	85910					51546
macro avg	0.52	0.5	0.51	34364	macro_avg	0.46	0.27	0.32	85910					51546
weighted avg	0.57	0.58	0.57	34364	weighted_avg	0.46	0.47	0.42	85910					51546
Score for Sentiment	0.565155				Score for Sentiment	0.725410313					0.160255			
Accuracy for Emotion	0.565155				Accuracy for Emotion	0.725410313					0.160255			
Precision (Weighted) for Emotion	0.571357				Precision (Weighted) for Emotion	0.724313449					0.152957			
F1 Score (Weighted) for Emotion	0.549716				F1 Score (Weighted) for Emotion	0.724585208					0.17487			
F1 Score (Macro) for Emotion	0.490242				F1 Score (Macro) for Emotion	0.704508824					0.214267			
	precision	recall	f1-score	support		precision	recall	f1-score	support					
0	0.53	0.14	0.22	3816	0	0.65	0.58	0.61	9488		0.12	0.44	0.39	5672
1	0.57	0.46	0.51	7745	1	0.71	0.73	0.72	19231		0.14	0.27	0.21	11486
2	0.48	0.65	0.55	11029	2	0.7	0.7	0.7	27769		0.22	0.05	0.15	16740
3	0.67	0.69	0.68	11774	3	0.79	0.8	0.79	29422		0.12	0.11	0.11	17648
accuracy			0.57	34364	accuracy			0.73	85910				0.16	51546
macro avg	0.56	0.49	0.49	34364	macro avg	0.71	0.7	0.7	85910		0.15	0.21	0.21	51546
weighted avg	0.57	0.57	0.55	34364	weighted avg	0.72	0.73	0.72	85910		0.15	0.16	0.17	51546

MLP Grid Search CV						50% training/50% testing											
80% training/20% testing																	
Score for Emotion	0.38347545					Best Score	0.390598					Delta (new-old)	0.007123				
Accuracy for Emotion	0.48879641					Accuracy for Emotion	0.484751						-0.00404				
Precision (Weighted) for Emotion	0.4837059					Precision (Weighted) for Emotion	0.48579						0.002084				
F1 Score (Weighted) for Emotion	0.46375137					F1 Score (Weighted) for Emotion	0.453676						-0.01008				
F1 Score (Macro) for Emotion	0.36344663					F1 Score (Macro) for Emotion	0.34276						-0.02069				
	precision	recall	f1-score	support			precision	recall	f1-score	support		precision	recall	f1-score	support		
	0	0.54	0.62	0.58	2111		0	0.54	0.61	0.57	5237		0	-0.01	-0.01	3126	
	1	0.59	0.62	0.61	1213		1	0.58	0.59	0.59	3015		-0.01	-0.03	-0.02	1802	
	2	0.48	0.37	0.42	1035		2	0.5	0.34	0.4	2615		0.02	-0.03	-0.02	1580	
	3	0.41	0.27	0.32	1684		3	0.41	0.25	0.31	4202		0	-0.02	-0.01	2518	
	4	0.39	0.24	0.3	2158		4	0.43	0.23	0.3	5652		0.04	-0.01		3494	
	5	0.37	0.3	0.33	681		5	0.41	0.29	0.34	1781		0.04	-0.01	0.01	1100	
	6	0.46	0.28	0.35	1025		6	0.47	0.24	0.32	2490		0.01	-0.04	-0.03	1465	
	7	0.46	0.31	0.37	1172		7	0.49	0.3	0.37	2907		0.03	-0.01		1735	
	8	0.52	0.26	0.35	423		8	0.55	0.21	0.3	1049		0.03	-0.05	-0.05	626	
	9	0.48	0.22	0.3	919		9	0.44	0.18	0.26	2369		-0.04	-0.04	-0.04	1450	
	10	0.43	0.3	0.35	1576		10	0.42	0.27	0.33	3918		-0.01	-0.03	-0.02	2342	
	11	0.54	0.29	0.38	588		11	0.54	0.27	0.36	1484		0	-0.02	-0.02	896	
	12	0.46	0.16	0.23	276		12	0.58	0.12	0.19	725		0.12	-0.04	-0.04	449	
	13	0.43	0.19	0.26	583		13	0.46	0.19	0.26	1458		0.03	0	0	875	
	14	0.57	0.3	0.39	338		14	0.58	0.28	0.38	902		0.01	-0.02	-0.01	564	
	15	0.73	0.8	0.76	1408		15	0.74	0.8	0.77	3520		0.01	0	0.01	2112	
	16	0.2	0.01	0.02	81		16	0.2	0.01	0.01	178		0	0	-0.01	97	
	17	0.5	0.36	0.42	910		17	0.47	0.31	0.37	2113		-0.03	-0.05	-0.05	1203	
	18	0.65	0.62	0.63	1000		18	0.64	0.63	0.63	2428		-0.01	0.01	0	1428	
	19	0.46	0.06	0.11	180		19	0.52	0.03	0.05	406		0.06	-0.03	-0.06	226	
	20	0.47	0.73	0.57	11089		20	0.45	0.76	0.57	27720		-0.02	0.03	0	16631	
	21	0.51	0.4	0.45	903		21	0.5	0.35	0.41	2217		-0.01	-0.05	-0.04	1314	
	22	0.56	0.06	0.11	141		22	0.39	0.03	0.05	354		-0.17	-0.03	-0.06	213	
	23	0.38	0.18	0.25	981		23	0.43	0.17	0.24	2398		0.05	-0.01	-0.01	1417	
	24	0.41	0.07	0.12	154		24	0.52	0.03	0.06	380		0.11	-0.04	-0.06	226	
	25	0.59	0.32	0.41	299		25	0.58	0.27	0.37	768		-0.01	-0.05	-0.04	469	
	26	0.44	0.31	0.36	743		26	0.49	0.3	0.37	1920		0.05	-0.01	0.01	1177	
	27	0.48	0.34	0.4	693		27	0.51	0.33	0.4	1704		0.03	-0.01	0	1011	
	accuracy			0.49	34364		accuracy			0.48	85910					-0.01	51546
	macro	0.48	0.32	0.36	34364		macro_avg	0.49	0.3	0.34	85910		0.01	-0.02	-0.02	51546	
	weighted_avg	0.48	0.49	0.46	34364		weighted_i	0.49	0.48	0.45	85910		0.01	-0.01	-0.01	51546	
Best Score	0.53839044					Best estimator (Sentiment)	0.543696					0.005306					
Accuracy for Emotion	0.61247235					Accuracy for Emotion	0.617332					0.00486					
Precision (Weighted) for Emotion	0.60704895					Precision (Weighted) for Emotion	0.612228					0.005179					
F1 Score (Weighted) for Emotion	0.60548715					F1 Score (Weighted) for Emotion	0.611357					0.00587					
F1 Score (Macro) for Emotion	0.57227864					F1 Score (Macro) for Emotion	0.57956					0.007282					
	precision	recall	f1-score	support			precision	recall	f1-score	support							
	0	0.55	0.33	0.41	3871												
	1	0.61	0.6	0.6	7719		0	0.55	0.35	0.42	9499		-0.06	-0.25	-0.18	1780	
	2	0.57	0.56	0.57	11089		1	0.62	0.61	0.61	19487		0.05	0.05	0.04	8398	
	3	0.66	0.76	0.71	11685		2	0.58	0.57	0.57	27720		-0.08	-0.19	-0.14	16035	
							3	0.66	0.75	0.71	29204		0	-0.01	0	29204	
	accuracy			0.61	34364		accuracy			0.62	85910				0.01	51546	
	macro avg	0.6	0.56	0.57	34364		macro_avg	0.6	0.57	0.58	85910		0	0.01	0.01	51546	
	weighted avg	0.61	0.61	0.61	34364		weighted_i	0.61	0.62	0.61	85910		0	0.01	0	51546	

MLP Grid Search CV					50% training/50% testing					Delta (new-old)				
80% training/20% testing					50% training/50% testing									
Best Score	0.421342				Best Score	0.41029								
Accuracy for Emotion	0.421342				Accuracy for Emotion	0.41029								
Precision (Weighted) for Emotion	0.367309				Precision (Weighted) for Emotion	0.332184								
F1 Score (Weighted) for Emotion	0.340128				F1 Score (Weighted) for Emotion	0.316989								
F1 Score (Macro) for Emotion	0.201855				F1 Score (Macro) for Emotion	0.177569								
precision	recall	f1-score	support		precision	recall	f1-score	support		precision	recall	f1-score	support	
0	0.48	0.5	0.49	2120	0	0.41	0.48	0.44	5187	-0.07	-0.02	-0.05	3067	
1	0.49	0.59	0.54	1226	1	0.51	0.56	0.53	3083	0.02	-0.03	-0.01	1857	
2	0.36	0.2	0.26	1075	2	0.33	0.07	0.12	2664	-0.03	-0.13	-0.14	1589	
3	0.14	0.04	0.06	1586	3	0.18	0.01	0.02	4114	0.04	-0.03	-0.04	2528	
4	0.27	0.07	0.11	2277	4	0.3	0.04	0.07	5673	0.03	-0.03	-0.04	3396	
5	0.25	0	0	735	5	0.16	0.03	0.05	1744	-0.09	0.03	0.05	1009	
6	0.33	0.07	0.11	953	6	0.23	0.07	0.1	2430	-0.1	0	-0.01	1477	
7	0.32	0.12	0.17	1162	7	0.19	0.09	0.13	2941	-0.13	-0.03	-0.04	1779	
8	0.44	0.06	0.11	428	8	0.37	0.12	0.18	1028	-0.07	0.06	0.07	600	
9	0	0	0	949	9	0	0	0	2312	0	0	0	1363	
10	0.17	0.06	0.09	1576	10	0.14	0.01	0.01	3863	-0.03	-0.05	-0.08	2287	
11	0.51	0.03	0.06	620	11	0.51	0.09	0.15	1443	0	0.06	0.09	823	
12	1	0	0.01	292	12	0	0	0	754	-1	0	-0.01	462	
13	0.52	0.05	0.09	590	13	0.27	0.01	0.03	1519	-0.25	-0.04	-0.06	929	
14	0.44	0.29	0.35	358	14	0	0	0	885	-0.44	-0.29	-0.35	527	
15	0.73	0.8	0.76	1435	15	0.77	0.75	0.76	3546	0.04	-0.05	0	2111	
16	0	0	0	76	16	0	0	0	183	0	0	0	107	
17	0.31	0.18	0.23	844	17	0.27	0.16	0.2	2161	-0.04	-0.02	-0.03	1317	
18	0.57	0.6	0.58	1027	18	0.57	0.6	0.58	2505	0	0	0	1478	
19	0	0	0	138	19	0	0	0	407	0	0	0	269	
20	0.41	0.84	0.55	11027	20	0.4	0.87	0.55	27658	-0.01	0.03	0	16631	
21	0.48	0.22	0.3	924	21	0.48	0.18	0.27	2316	0	-0.04	-0.03	1392	
22	0	0	0	132	22	0	0	0	350	0	0	0	218	
23	0	0	0	946	23	0	0	0	2328	0	0	0	1382	
24	0	0	0	161	24	0	0	0	400	0	0	0	239	
25	0.33	0.36	0.35	280	25	0.38	0.41	0.4	769	0.05	0.05	0.05	489	
26	0.27	0.23	0.25	753	26	0.25	0.15	0.19	1941	-0.02	-0.08	-0.06	1188	
27	0.36	0.12	0.18	674	27	0.26	0.16	0.2	1706	-0.1	0.04	0.02	1032	
accuracy			0.42	34364	accuracy			0.41	85910	0	0	-0.01	51546	
macro	0.33	0.19	0.2	34364	macro	0.25	0.17	0.18	85910	-0.08	-0.02	-0.02	51546	
weighted	0.37	0.42	0.34	34364	weighted	0.33	0.41	0.32	85910	-0.04	-0.01	-0.02	51546	
Best Score	0.554266				Best estimator (Sentiment)	0.554266				0				
Accuracy for Emotion	0.554266				Accuracy for Emotion	0.554266				0				
Precision (Weighted) for Emotion	0.551942				Precision (Weighted) for Emotion	0.551942				0				
F1 Score (Weighted) for Emotion	0.549862				F1 Score (Weighted) for Emotion	0.549862				0				
F1 Score (Macro) for Emotion	0.506429				F1 Score (Macro) for Emotion	0.506429				0				
precision	recall	f1-score	support		precision	recall	f1-score	support		precision	recall	f1-score	support	
0	0.41	0.25	0.31	9405	0	0.41	0.25	0.31	9405	0	0	0	0	
1	0.54	0.52	0.53	19335	1	0.54	0.52	0.53	19335	0	0	0	0	
2	0.48	0.56	0.52	27658	2	0.48	0.56	0.52	27658	0	0	0	0	
3	0.67	0.67	0.67	29512	3	0.67	0.67	0.67	29512	0	0	0	0	
accuracy			0.55	85910	accuracy			0.55	85910			0	0	
macro avg	0.53	0.5	0.51	85910	macro avg	0.53	0.5	0.51	85910	0	0	0	0	
weighted avg	0.55	0.55	0.55	85910	weighted avg	0.55	0.55	0.55	85910	0	0	0	0	

MLP Embedding					MLP Grid Search CV Embedding				
80% training/20% testing					80% training/20% testing				
Score for Emotions	0.405671				Score for Emotions: 0.3679915767307186				
Accuracy	0.405671				Accuracy: 0.3679915767307186				
Precision (Weighted)	0.376602				Precision (Weighted): 0.3628356344259193				
F1 Score (Weighted)	0.309633				F1 Score (Weighted): 0.2611198192704462				
F1 Score (Macro)	0.171447				F1 Score (Macro): 0.1216496884249517				
	precision	recall	f1-score	support		precision	recall	f1-score	support
0	0.47	0.41	0.44	2038	0	0.45	0.33	0.38	2052
1	0.46	0.35	0.4	1197	1	0.48	0.14	0.22	1173
2	0.32	0.16	0.22	988	2	0.36	0.07	0.12	1084
3	0.24	0.02	0.05	1652	3	0.23	0.03	0.05	1724
4	0.37	0.03	0.05	2217	4	0.57	0.01	0.03	2254
5	0.35	0.05	0.09	697	5	0.25	0.02	0.03	722
6	0.48	0.01	0.02	999	6	0.36	0.01	0.02	995
7	0.37	0.08	0.14	1167	7	0.35	0.19	0.25	1189
8	0.6	0.08	0.13	453	8	0.48	0.04	0.08	445
9	0.2	0	0.01	909	9	0.22	0.00	0.00	923
10	0.31	0.05	0.09	1562	10	0.26	0.02	0.03	1509
11	0.33	0.08	0.13	555	11	0.33	0.06	0.10	562
12	0	0	0	286	12	0.00	0.00	0.00	273
13	0.49	0.03	0.06	617	13	0.36	0.04	0.07	566
14	0.42	0.08	0.13	375	14	0.38	0.07	0.12	364
15	0.71	0.74	0.73	1445	15	0.53	0.39	0.45	1422
16	0	0	0	77	16	0.00	0.00	0.00	73
17	0.34	0.13	0.19	860	17	0.32	0.07	0.11	879
18	0.59	0.55	0.57	993	18	0.55	0.37	0.44	980
19	0	0	0	164	19	0.40	0.01	0.03	145
20	0.38	0.89	0.53	11171	20	0.35	0.92	0.51	10982
21	0.4	0.14	0.21	930	21	0.35	0.08	0.13	908
22	0	0	0	143	22	0.00	0.00	0.00	143
23	0	0	0	975	23	0.00	0.00	0.00	928
24	0	0	0	143	24	0.00	0.00	0.00	159
25	0.42	0.24	0.3	300	25	0.42	0.05	0.08	311
26	0.39	0.15	0.22	760	26	0.40	0.08	0.13	763
27	0.33	0.05	0.08	680	27	0.42	0.01	0.01	663
accuracy			0.41	34353	accuracy			0.37	34191
macro avg	0.32	0.16	0.17	34353	macro avg	0.32	0.11	0.12	34191
weighted avg	0.38	0.41	0.31	34353	weighted avg	0.36	0.37	0.26	34191
Best Score	0.53579				Score for Sentiment: 0.49700213506478313				
Accuracy for Emotion	0.53579				Accuracy: 0.49700213506478313				
Precision (Weighted) for Emotion	0.532886				Precision (Weighted): 0.5078246201807983				
F1 Score (Weighted) for Emotion	0.519599				F1 Score (Weighted): 0.4878377367196978				
F1 Score (Macro) for Emotion	0.462109				F1 Score (Macro): 0.44234578092707083				
	precision	recall	f1-score	support		precision	recall	f1-score	support
0	0.47	0.13	0.2	3821	0	0.52	0.15	0.24	3775
1	0.53	0.44	0.48	7628	1	0.47	0.44	0.45	7731
2	0.47	0.59	0.52	11171	2	0.43	0.57	0.49	10982
3	0.62	0.68	0.65	11793	3	0.61	0.58	0.59	11703
accuracy			0.54	34353	accuracy			0.50	34191
macro avg	0.52	0.46	0.46	34353	macro avg	0.50	0.43	0.44	34191
weighted avg	0.53	0.54	0.52	34353	weighted avg	0.51	0.50	0.49	34191

MLP Twitter Embedding

80% training/20% testing

Score for Emotions: 0.3679915767307186

Accuracy: 0.3679915767307186

Precision (Weighted): 0.3628356344259193

F1 Score (Weighted): 0.2611198192704462

F1 Score (Macro): 0.1216496884249517

	precision	recall	f1-score	support
0	0.45	0.33	0.38	2052
1	0.48	0.14	0.22	1173
2	0.36	0.07	0.12	1084
3	0.23	0.03	0.05	1724
4	0.57	0.01	0.03	2254
5	0.25	0.02	0.03	722
6	0.36	0.01	0.02	995
7	0.35	0.19	0.25	1189
8	0.48	0.04	0.08	445
9	0.22	0.00	0.00	923
10	0.26	0.02	0.03	1509
11	0.33	0.06	0.10	562
12	0.00	0.00	0.00	273
13	0.36	0.04	0.07	566
14	0.38	0.07	0.12	364
15	0.53	0.39	0.45	1422
16	0.00	0.00	0.00	73
17	0.32	0.07	0.11	879
18	0.55	0.37	0.44	980
19	0.40	0.01	0.03	145
20	0.35	0.92	0.51	10982
21	0.35	0.08	0.13	908
22	0.00	0.00	0.00	143
23	0.00	0.00	0.00	928
24	0.00	0.00	0.00	159
25	0.42	0.05	0.08	311
26	0.40	0.08	0.13	763
27	0.42	0.01	0.01	663
accuracy			0.37	34191
macro avg	0.32	0.11	0.12	34191
weighted avg	0.36	0.37	0.26	34191

Score for Sentiments: 0.49700213506478313

Accuracy: 0.49700213506478313

Precision (Weighted): 0.5078246201807983

F1 Score (Weighted): 0.4878377367196978

F1 Score (Macro): 0.44234578092707083

	precision	recall	f1-score	support
0	0.52	0.15	0.24	3775
1	0.47	0.44	0.45	7731
2	0.43	0.57	0.49	10982
3	0.61	0.58	0.59	11703
accuracy			0.50	34191
macro avg	0.50	0.43	0.44	34191
weighted avg	0.51	0.50	0.49	34191

MLP Grid Twitter Embedding

80% training/20% testing

Score for Emotions: 0.4219133996489175

Accuracy: 0.4219133996489175

Precision (Weighted): 0.4180194062051852

F1 Score (Weighted): 0.3461301644672839

F1 Score (Macro): 0.2360072673725874

	precision	recall	f1-score	support
0	0.48	0.51	0.50	2105
1	0.50	0.39	0.44	1247
2	0.40	0.22	0.28	990
3	0.30	0.05	0.08	1621
4	0.39	0.04	0.07	2250
5	0.38	0.09	0.14	697
6	0.35	0.05	0.09	924
7	0.42	0.29	0.34	1146
8	0.52	0.15	0.24	427
9	0.23	0.05	0.08	950
10	0.33	0.07	0.11	1502
11	0.31	0.24	0.27	590
12	0.45	0.12	0.19	308
13	0.60	0.09	0.15	564
14	0.56	0.36	0.44	373
15	0.53	0.64	0.58	1393
16	0.27	0.06	0.09	70
17	0.45	0.16	0.23	873
18	0.55	0.59	0.57	982
19	0.50	0.04	0.08	144
20	0.40	0.85	0.55	11079
21	0.52	0.16	0.24	906
22	0.64	0.05	0.09	140
23	0.33	0.01	0.01	923
24	0.12	0.01	0.01	161
25	0.49	0.25	0.33	334
26	0.48	0.14	0.22	786
27	0.54	0.10	0.17	695
accuracy			0.42	34180
macro avg	0.43	0.21	0.24	34180
weighted avg	0.42	0.42	0.35	34180

Score for Sentiments: 0.5780280866003511

Accuracy: 0.5780280866003511

Precision (Weighted): 0.5856603000372135

F1 Score (Weighted): 0.5771937284233294

F1 Score (Macro): 0.5485188357308813

	precision	recall	f1-score	support
0	0.51	0.35	0.42	3688
1	0.50	0.66	0.57	7668
2	0.54	0.53	0.53	11079
3	0.71	0.64	0.67	11745
accuracy			0.58	34180
macro avg	0.56	0.55	0.55	34180
weighted avg	0.59	0.58	0.58	34180

MLP Wiki Embedding
80% training/20% testing

Score for Emotions: 0.4219133996489175

Accuracy: 0.4219133996489175

Precision (Weighted): 0.4180194062051852

F1 Score (Weighted): 0.3461301644672839

F1 Score (Macro): 0.2360072673725874

	precision	recall	f1-score	support
0	0.48	0.51	0.50	2205
1	0.50	0.39	0.44	1247
2	0.40	0.22	0.28	990
3	0.30	0.05	0.08	1621
4	0.39	0.04	0.07	2250
5	0.38	0.09	0.14	697
6	0.35	0.05	0.09	924
7	0.42	0.29	0.34	1146
8	0.52	0.15	0.24	427
9	0.23	0.05	0.08	950
10	0.33	0.07	0.11	1502
11	0.31	0.24	0.27	590
12	0.45	0.12	0.19	308
13	0.60	0.09	0.15	564
14	0.56	0.36	0.44	373
15	0.53	0.64	0.58	1393
16	0.27	0.06	0.09	70
17	0.45	0.16	0.23	873
18	0.55	0.59	0.57	982
19	0.50	0.04	0.08	144
20	0.40	0.85	0.55	11079
21	0.52	0.16	0.24	906
22	0.64	0.05	0.09	140
23	0.33	0.01	0.01	923
24	0.12	0.01	0.01	161
25	0.49	0.25	0.33	334
26	0.48	0.14	0.22	786
27	0.54	0.10	0.17	695
accuracy			0.42	34180
macro avg	0.43	0.21	0.24	34180
weighted avg	0.42	0.42	0.35	34180

Score for Sentiments: 0.5780280866003511

Accuracy: 0.5780280866003511

Precision (Weighted): 0.5886603000371335

F1 Score (Weighted): 0.5771937286231294

F1 Score (Macro): 0.5485188357308813

	precision	recall	f1-score	support
0	0.51	0.35	0.42	3688
1	0.50	0.66	0.57	7668
2	0.54	0.53	0.53	11079
3	0.71	0.64	0.67	11745
accuracy			0.58	34180
macro avg	0.56	0.55	0.55	34180
weighted avg	0.59	0.58	0.58	34180

MLP Wiki Grid Embedding
80% training/20% testing

Score for Emotions: 0.39220331052231383

Accuracy: 0.39220331052231383

Precision (Weighted): 0.36957817814234456

F1 Score (Weighted): 0.3166404515132536

F1 Score (Macro): 0.20444237785417422

	precision	recall	f1-score	support
0	0.48	0.42	0.45	2059
1	0.51	0.32	0.39	1250
2	0.30	0.15	0.20	1034
3	0.22	0.02	0.04	1712
4	0.32	0.03	0.06	2274
5	0.28	0.10	0.15	689
6	0.31	0.05	0.09	983
7	0.38	0.22	0.28	1149
8	0.36	0.16	0.22	417
9	0.15	0.02	0.04	902
10	0.26	0.08	0.12	1539
11	0.29	0.12	0.16	613
12	0.37	0.06	0.11	265
13	0.28	0.09	0.13	572
14	0.43	0.28	0.34	354
15	0.64	0.48	0.55	1451
16	0.18	0.04	0.06	78
17	0.34	0.16	0.22	808
18	0.51	0.52	0.52	1016
19	0.32	0.07	0.11	172
20	0.38	0.84	0.52	10990
21	0.35	0.18	0.24	847
22	0.27	0.02	0.04	127
23	0.45	0.01	0.03	953
24	0.29	0.01	0.02	164
25	0.42	0.21	0.28	314
26	0.37	0.16	0.22	775
27	0.29	0.08	0.12	687
accuracy			0.39	34184
macro avg	0.35	0.18	0.20	34184
weighted avg	0.37	0.39	0.32	34184

Score for Sentiments: 0.5150318769374744

Accuracy: 0.5150318769374744

Precision (Weighted): 0.5115079518315457

F1 Score (Weighted): 0.5095379174070963

F1 Score (Macro): 0.47578349033861805

	precision	recall	f1-score	support
0	0.46	0.25	0.32	3772
1	0.48	0.51	0.49	7758
2	0.45	0.48	0.47	10990
3	0.60	0.64	0.62	11674
accuracy			0.52	34194
macro avg	0.50	0.47	0.48	34194
weighted avg	0.51	0.52	0.51	34194