

Full Results of Prediction Performance

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Table 1: 2-classes experiments results with 4 datasets

Dataset	Method	Accur.	Posit. Sentiment			Negat. Sentiment			MacroF1	Coverage	
			P	R	F1	P	R	F1			
Comments _BBC	AFINN	66.56	23.08	81.08	35.93	96.32	64.66	77.38	56.65	85.11	
	ANEW_SUB	31.37	15.48	95.79	26.65	97.18	21.73	35.52	31.08	97.07	
	Emolex	59.64	21.52	89.04	34.67	97.38	55.62	70.80	52.73	80.72	
	Emoticons	33.33	0.00	0.00	0.00	100.00	33.33	50.00	25.00	0.40	
	Emoticons DS	13.33	13.10	100.00	23.17	100.00	0.31	0.61	11.89	99.73	
	NRC Hashtag	84.45	33.33	25.27	28.75	89.76	92.83	91.27	60.01	97.47	
	LIWC07	50.10	15.38	58.33	24.35	88.00	48.78	62.77	43.56	69.55	
	LIWC15	63.21	25.86	90.67	40.24	97.55	58.86	73.42	56.83	73.01	
	Opinion Finder	74.43	21.74	62.50	32.26	94.93	75.72	84.24	58.25	76.46	
	Opinion Lexicon	74.14	29.81	84.93	44.13	97.24	72.66	83.17	63.65	80.72	
	PANAS-t	58.73	20.00	75.00	31.58	93.94	56.36	70.45	51.02	8.38	
	Pattern.en	41.75	19.73	93.55	32.58	96.61	32.57	48.72	40.65	54.79	
	SANN	52.60	18.33	80.49	29.86	94.56	48.60	64.20	47.03	43.48	
	SASA	61.61	23.50	66.20	34.69	90.80	60.77	72.81	53.75	61.30	
	Semantria	83.43	40.00	84.75	54.35	97.64	83.26	89.88	72.11	67.42	
	SenticNet	66.07	24.44	74.16	36.77	94.24	64.83	76.81	56.79	88.96	
	Sentiment140	68.51	24.00	69.77	35.71	94.04	68.33	79.15	57.43	45.61	
	Sentiment140.L	56.85	18.52	69.15	29.21	92.35	55.03	68.97	49.09	97.07	
	SentiStrength	93.93	64.29	78.26	70.59	97.72	95.54	96.61	83.60	32.85	
	SentiWordNet	57.49	20.00	88.06	32.60	97.13	53.45	68.96	50.78	76.33	
	SO-CAL	75.28	28.93	80.28	42.54	96.71	74.64	84.25	63.40	82.85	
	Stanford DM	89.45	63.16	40.91	49.66	91.81	96.52	94.11	71.88	92.02	
	Umigon	79.37	39.13	61.02	47.68	92.10	82.72	87.15	67.42	50.93	
	VADER	62.76	22.68	85.54	35.86	96.75	59.60	73.76	54.81	90.69	
	Comments _Digg	AFINN	70.94	47.01	81.82	59.72	91.17	67.05	77.27	68.49	74.81
		ANEW_SUB	43.25	30.98	92.31	46.39	90.13	25.46	39.71	43.05	93.73
		Emolex	61.71	34.60	75.83	47.52	88.93	57.53	69.87	58.69	67.14
Emoticons		73.08	72.22	86.67	78.79	75.00	54.55	63.16	70.97	3.32	
Emoticons DS		28.24	27.30	100.00	42.89	100.00	1.77	3.48	23.19	98.72	
NRC Hashtag		74.69	51.01	40.64	45.24	80.80	86.48	83.54	64.39	92.97	
LIWC07		46.15	27.44	58.40	37.34	72.49	41.52	52.79	45.07	58.18	
LIWC15		70.67	49.81	90.91	64.36	94.35	62.36	75.09	69.72	62.79	
Opinion Finder		71.14	43.04	64.76	51.71	86.88	73.13	79.42	65.56	56.27	
Opinion Lexicon		71.82	47.45	86.43	61.27	93.40	66.75	77.86	69.56	69.44	
PANAS-t		68.00	12.50	50.00	20.00	94.12	69.57	80.00	50.00	3.20	
Pattern.en		60.05	43.73	92.14	59.31	92.57	45.21	60.75	60.03	56.65	
SANN		55.98	36.06	80.65	49.83	86.67	46.80	60.78	55.31	43.86	
SASA		65.54	40.26	66.91	50.27	84.82	65.06	73.64	61.95	68.29	
Semantria		82.46	62.72	88.33	73.36	94.81	80.25	86.93	80.14	56.14	
SenticNet		69.40	46.30	72.46	56.50	86.77	68.25	76.40	66.45	96.55	
Sentiment140		85.06	62.50	78.95	69.77	93.65	86.76	90.08	79.92	33.38	
Sentiment140.L		67.76	42.07	73.45	53.50	88.01	65.84	75.33	64.41	89.64	
SentiStrength		92.09	78.69	92.31	84.96	97.40	92.02	94.64	89.80	27.49	
SentiWordNet		62.17	36.86	77.68	50.00	88.84	57.18	69.58	59.79	58.82	
SO-CAL		76.55	52.86	77.08	62.71	90.65	76.37	82.90	72.81	71.99	
Stanford DM		69.16	35.29	20.27	25.75	75.21	86.68	80.54	53.15	78.90	
Umigon		83.37	66.22	75.38	70.50	90.72	86.23	88.42	79.46	63.04	
VADER		69.05	45.48	85.88	59.47	92.55	63.00	74.97	67.22	82.23	
Comments _NYT		AFINN	73.82	66.35	78.85	72.07	81.55	70.04	75.36	73.71	55.14
		ANEW_SUB	56.33	50.82	92.91	65.70	81.96	26.38	39.92	52.81	94.36
		Emolex	64.57	57.20	81.71	67.29	77.52	50.78	61.36	64.33	65.69
	Emoticons	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Emoticons DS	44.75	44.66	99.86	61.72	78.57	0.40	0.80	31.26	99.84	
	NRC Hashtag	61.89	58.47	49.85	53.82	63.98	71.55	67.55	60.69	91.77	
	LIWC07	49.52	44.96	59.96	51.39	56.18	41.15	47.50	49.44	46.30	
	LIWC15	73.35	66.72	83.85	74.31	82.43	64.42	72.32	73.31	46.58	
	Opinion Finder	75.11	70.17	61.61	65.61	77.64	83.58	80.50	73.06	35.26	
	Opinion Lexicon	74.61	67.54	77.95	72.37	81.46	72.12	76.50	74.44	57.80	
	PANAS-t	66.32	71.05	56.25	62.79	63.16	76.60	69.23	66.01	1.92	
	Pattern.en	62.11	57.23	86.05	68.74	75.15	39.63	51.89	60.32	48.18	
	SANN	66.88	58.26	80.76	67.69	79.57	56.43	66.03	66.86	37.18	
	SASA	56.47	51.55	58.92	54.99	61.70	54.45	57.85	56.42	50.49	
	Semantria	77.72	72.66	77.67	75.08	82.07	77.76	79.86	77.47	55.54	
	SenticNet	65.11	61.15	59.65	60.39	68.16	69.51	68.83	64.61	99.68	
	Sentiment140	78.10	79.37	61.22	69.12	77.54	89.37	83.04	76.08	12.37	
	Sentiment140.L	63.48	57.91	66.34	61.84	69.30	61.17	64.98	63.41	89.02	
	SentiStrength	81.42	79.50	62.71	70.11	82.15	91.39	86.52	78.32	17.63	
	SentiWordNet	65.08	59.13	73.17	65.41	72.59	58.42	64.74	65.07	46.60	
	SO-CAL	72.52	66.14	75.74	70.61	78.88	70.03	74.19	72.00	69.01	
	Stanford DM	63.85	75.77	26.03	38.75	61.73	93.48	74.36	56.56	82.39	
	Umigon	70.03	69.56	55.97	62.03	70.29	80.96	75.25	68.64	29.82	
	VADER	71.93	64.33	80.59	71.55	81.17	65.18	72.30	71.92	65.18	
	Comments _TED	AFINN	75.28	68.85	87.70	77.14	85.17	64.03	73.10	75.12	72.90
		ANEW_SUB	54.91	49.74	91.26	64.38	78.40	25.59	38.58	51.48	95.19
		Emolex	67.27	59.88	85.46	70.42	81.03	52.03	63.37	66.89	68.50
Emoticons		91.67	100.00	75.00	85.71	88.89	100.00	94.12	89.92	1.65	
Emoticons DS		43.74	43.74	100.00	60.86	0.00	0.00	0.00	30.43	100.00	
NRC Hashtag		71.00	68.05	58.36	62.84	72.66	80.15	76.23	69.53	92.02	
LIWC07		52.96	47.67	65.78	55.28	61.21	42.80	50.37	52.83	58.18	
LIWC15		75.51	72.14	86.70	78.75	81.21	63.21	71.09	74.92	61.21	
Opinion Finder		70.99	66.48	66.12	66.30	74.38	74.69	74.53	70.42	58.32	
Opinion Lexicon		74.35	68.15	84.58	75.49	82.89	65.40	73.11	74.30	74.55	
PANAS-t		82.35	100.00	75.00	85.71	62.50	100.00	76.92	81.32	2.34	
Pattern.en		66.23	62.89	90.61	74.25	77.67	37.91	50.96	62.60	62.72	
SANN		72.55	67.82	76.96	72.10	77.73	68.77	72.98	72.54	68.64	
SASA		65.94	59.63	77.40	67.36	75.00	56.40	64.38	65.87	63.00	
Semantria		75.21	73.09	82.38	77.46	78.17	67.54	72.47	74.96	64.92	
SenticNet		70.81	63.05	78.71	70.01	79.94	64.78	71.56	70.79	98.49	
Sentiment140		79.62	77.22	81.33	79.22	82.05	78.05	80.00	79.61	21.60	
Sentiment140.L		61.45	54.48	75.00	63.11	72.14	50.81	59.62	61.37	91.33	
SentiStrength		82.81	83.59	86.29	84.92	81.72	78.35	80.00	82.46	30.40	
SentiWordNet		58.67	56.70	77.46	65.48	63.08	39.42	48.52	57.00	57.91	
SO-CAL		73.87	73.36	77.97	75.59	74.49	69.43	71.88	73.73	75.79	
Stanford DM		75.34	83.42	58.33	68.66	71.46	90.00	79.67	74.16	81.98	
Umigon		70.86	74.09	75.81	74.94	66.23	64.15	65.18	70.06	51.44	
VADER		73.97	67.14	84.95	75.00	83.46	64.63	72.85	73.93	83.49	

Table 2: 2-classes experiments results with 4 datasets

Dataset	Method	Accur.	Posit. Sentiment			Negat. Sentiment			MacroF1	Coverage
			P	R	F1	P	R	F1		
Comments_YTB	AFINN	85.92	86.93	94.08	90.36	82.72	66.73	73.87	82.12	74.18
	ANEW.SUB	76.33	75.78	96.22	84.79	80.00	32.94	46.67	65.73	88.94
	Emolex	79.31	82.46	87.58	84.94	71.70	62.82	66.97	75.95	58.63
	Emoticons	88.44	91.50	95.31	93.37	64.00	48.48	55.17	74.27	9.25
	Emoticons DS	68.86	68.91	99.63	81.47	62.50	1.34	2.62	42.05	97.99
	NRC Hashtag	72.24	90.94	65.25	75.99	54.76	86.62	67.10	71.54	89.31
	LIWC07	64.86	72.42	80.68	76.33	37.69	27.55	31.83	54.08	63.65
	LIWC15	88.70	89.30	96.21	92.62	86.39	67.61	75.85	84.24	72.04
	Opinion Finder	73.64	84.12	74.60	79.08	58.43	71.72	64.40	71.74	42.43
	Opinion Lexicon	84.89	87.88	91.06	89.44	76.84	70.26	73.40	81.42	68.01
	PANAS-t	65.45	60.00	62.50	61.22	70.00	67.74	68.85	65.04	2.26
	Pattern.en	87.24	87.87	96.68	92.06	83.85	56.33	67.39	79.73	67.97
	SANN	81.05	84.28	90.14	87.11	70.82	58.71	64.20	75.65	44.04
	SASA	69.17	84.55	67.96	75.36	49.81	71.91	58.85	67.10	71.63
	Semantria	88.24	92.75	90.80	91.76	77.36	81.59	79.42	85.59	59.42
	SenticNet	76.01	85.17	78.78	81.85	60.05	69.92	64.61	73.23	98.19
	Sentiment140	87.41	91.56	91.15	91.35	76.38	77.29	76.83	84.09	38.20
	Sentiment140.L	75.50	82.66	81.12	81.89	60.97	63.41	62.17	72.03	90.30
	SentiStrength	95.27	97.48	96.40	96.94	87.96	91.35	89.62	93.28	38.24
	SentiWordNet	75.26	83.05	82.00	82.52	56.81	58.60	57.69	70.10	59.00
	SO-CAL	85.98	90.64	89.08	89.85	75.86	78.85	77.33	83.59	68.63
	Stanford DM	69.04	93.56	58.90	72.29	50.41	91.15	64.92	68.60	79.81
Umigon	82.01	94.53	80.39	86.89	60.65	86.67	71.36	79.13	71.55	
VADER	85.82	86.86	93.98	90.28	82.56	66.72	73.80	82.04	80.92	
Reviews_I	AFINN	65.93	63.56	79.10	70.48	70.15	51.99	59.72	65.10	72.59
	ANEW.SUB	56.80	54.23	92.30	68.32	72.46	20.64	32.13	50.23	96.30
	Emolex	64.77	62.37	79.35	69.85	69.30	49.34	57.64	63.74	74.39
	Emoticons	60.00	0.00	0.00	0.00	60.00	100.00	75.00	37.50	0.05
	Emoticons DS	50.27	50.17	99.94	66.80	89.29	0.47	0.94	33.87	99.79
	NRC Hashtag	62.34	62.14	64.45	63.27	62.57	60.20	61.36	62.32	93.47
	LIWC07	63.00	61.37	82.45	70.36	67.08	40.81	50.75	60.56	66.08
	LIWC15	63.35	61.77	82.30	70.57	67.24	41.64	51.43	61.00	66.08
	Opinion Finder	26.55	100.00	26.55	41.96	0.00	0.00	0.00	20.98	49.12
	Opinion Lexicon	69.77	69.26	74.09	71.59	70.39	65.20	67.70	69.64	77.28
	PANAS-t	66.30	75.44	61.72	67.89	58.12	72.55	64.53	66.21	3.40
	Pattern.en	67.84	65.15	87.88	74.83	75.24	43.93	55.47	65.15	65.59
	SANN	61.81	61.41	70.47	65.63	62.39	52.52	57.03	61.33	61.76
	SASA	57.41	55.81	61.54	58.54	59.27	53.46	56.22	57.38	58.24
	Semantria	69.64	70.68	68.58	69.61	68.63	70.73	69.66	69.64	68.80
	SenticNet	96.30	98.15	96.63	97.39	91.92	95.47	93.66	95.52	69.41
	Sentiment140	73.08	70.04	75.11	72.48	76.20	71.27	73.65	73.07	18.67
	Sentiment140.L	63.18	60.01	83.00	69.66	70.73	42.61	53.18	61.42	93.51
	SentiStrength	67.54	72.40	65.28	68.66	62.84	70.23	66.33	67.49	26.98
	SentiWordNet	61.45	61.12	71.36	65.84	61.97	50.69	55.77	60.80	62.53
	SO-CAL	71.65	72.09	72.82	72.46	71.18	70.43	70.80	71.63	89.10
	Stanford DM	82.70	88.31	75.48	81.40	78.48	89.95	83.83	82.61	91.92
Umigon	63.44	66.36	55.62	60.52	61.30	71.37	65.95	63.24	53.95	
VADER	65.19	62.75	80.36	70.47	69.98	48.97	57.62	64.04	82.70	
Reviews_II	AFINN	65.95	63.40	78.99	70.34	70.44	52.33	60.05	65.19	73.93
	ANEW.SUB	56.61	53.82	93.15	68.23	74.53	20.06	31.61	49.92	96.92
	Emolex	64.96	62.04	80.00	69.88	70.52	49.41	58.11	64.00	75.15
	Emoticons	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Emoticons DS	49.86	49.77	99.92	66.45	85.19	0.43	0.86	33.65	99.80
	NRC Hashtag	61.56	60.96	63.80	62.35	62.22	59.33	60.74	61.55	91.65
	LIWC07	61.77	60.08	81.98	69.34	66.11	39.22	49.24	59.29	66.61
	LIWC15	64.37	62.52	83.25	71.41	68.95	42.69	52.73	62.07	66.18
	Opinion Finder	60.50	69.14	34.56	46.08	57.70	85.27	68.83	57.46	62.66
	Opinion Lexicon	70.11	69.28	74.97	72.01	71.15	65.00	67.93	69.97	77.98
	PANAS-t	66.85	74.16	63.16	68.22	60.10	71.60	65.35	66.78	3.51
	Pattern.en	68.24	65.09	88.82	75.13	77.06	44.08	56.08	65.60	65.99
	SANN	62.29	61.73	71.33	66.19	63.11	52.59	57.37	61.78	64.81
	SASA	57.40	56.00	61.91	58.81	59.07	53.06	55.90	57.35	58.98
	Semantria	70.30	70.96	69.99	70.47	69.63	70.61	70.12	70.30	69.86
	SenticNet	94.02	93.27	95.05	94.15	94.81	92.96	93.87	94.01	94.25
	Sentiment140	74.83	72.67	76.34	74.46	77.04	73.44	75.20	74.83	19.89
	Sentiment140.L	63.40	60.48	79.70	68.77	69.24	46.74	55.80	62.29	91.45
	SentiStrength	69.17	74.17	66.77	70.28	64.33	72.04	67.97	69.12	27.13
	SentiWordNet	61.99	61.55	71.05	65.96	62.65	52.25	56.98	61.47	62.81
	SO-CAL	72.18	72.42	73.69	73.05	71.92	70.61	71.26	72.15	88.99
	Stanford DM	86.17	89.11	82.37	85.61	83.64	89.95	86.68	86.15	91.46
Umigon	63.96	67.38	55.94	61.13	61.46	72.19	66.40	63.76	56.42	
VADER	65.63	62.76	81.10	70.76	71.27	49.35	58.32	64.54	84.14	
Myspace	AFINN	87.18	94.67	90.06	92.31	54.70	70.33	61.54	76.92	74.82
	ANEW.SUB	86.33	88.09	96.88	92.27	64.29	30.00	40.91	66.59	91.25
	Emolex	83.62	93.30	87.05	90.07	45.79	63.64	53.26	71.67	62.95
	Emoticons	90.59	97.30	92.31	94.74	45.45	71.43	55.56	75.15	10.19
	Emoticons DS	83.94	84.24	99.57	91.27	0.00	0.00	0.00	45.63	99.28
	NRC Hashtag	55.67	95.89	49.47	65.27	24.77	88.71	38.73	52.00	94.12
	LIWC07	83.07	90.30	90.12	90.21	37.18	37.66	37.42	63.82	68.71
	LIWC15	91.95	95.34	95.52	95.43	66.67	65.75	66.21	80.82	73.02
	Opinion Finder	72.78	94.27	73.04	82.31	28.83	71.11	41.03	61.67	40.53
	Opinion Lexicon	84.54	94.17	87.19	90.55	49.11	69.62	57.59	74.07	62.83
	PANAS-t	96.25	100.00	96.05	97.99	57.14	100.00	72.73	85.36	9.89
	Pattern.en	89.91	93.41	95.26	94.32	59.32	50.72	54.69	74.51	68.94
	SANN	81.27	91.87	85.33	88.48	43.10	59.52	50.00	69.24	32.01
	SASA	61.69	92.09	57.82	71.04	30.04	78.49	43.45	57.24	59.47
	Semantria	84.52	94.17	87.13	90.51	49.41	70.00	57.93	74.22	47.24
	SenticNet	71.97	92.17	72.91	81.42	31.64	66.92	42.96	62.19	98.80
	Sentiment140	91.63	97.11	93.43	95.24	57.38	76.09	65.42	80.33	53.00
	Sentiment140.L	80.83	92.92	83.80	88.12	41.40	64.17	50.33	69.23	95.08
	SentiStrength	97.72	100.00	97.50	98.73	79.31	100.00	88.46	93.60	31.53
	SentiWordNet	77.72	92.31	81.15	86.37	30.30	54.79	39.02	62.70	67.27
	SO-CAL	84.40	94.84	86.16	90.29	50.40	75.00	60.29	75.29	63.79
	Stanford DM	43.04	96.08	33.73	49.94	20.78	92.66	33.95	41.94	82.73
Umigon	76.71	96.72	75.78	84.98	34.00	82.93	48.23	66.60	75.18	
VADER	88.10	94.18	91.91	93.03	55.24	63.74	59.18	76.11	80.58	

Table 3: 2-classes experiments results with 4 datasets

Dataset	Method	Accur.	Posit. Sentiment			Negat. Sentiment			MacroF1	Coverage
			P	R	F1	P	R	F1		
Amazon	AFINN	78.69	80.17	87.87	83.84	75.43	63.14	68.74	76.29	62.80
	ANEW_SUB	65.28	63.79	95.82	76.59	77.33	20.79	32.77	54.68	94.93
	Emolex	66.59	71.89	72.91	72.40	58.31	57.08	57.69	65.04	58.86
	Emoticons	50.00	0.00	0.00	0.00	100.00	50.00	66.67	33.33	0.06
	Emoticons DS	59.95	59.61	100.00	74.70	100.00	2.04	4.00	39.35	99.53
	NRC Hashtag	64.13	74.30	60.52	66.70	54.60	69.40	61.12	63.91	89.81
	LIWC07	60.97	64.39	81.77	72.05	48.75	27.72	35.34	53.69	55.57
	LIWC15	76.74	77.25	91.65	83.83	74.94	48.06	58.57	71.20	56.45
	Opinion Finder	68.07	78.34	68.95	73.35	54.97	66.53	60.20	66.77	37.40
	Opinion Lexicon	80.82	82.25	88.48	85.25	77.85	67.96	72.57	78.91	67.15
	PANAS-t	74.07	87.18	79.07	82.93	40.00	54.55	46.15	64.54	1.50
	Pattern.en	75.71	76.73	91.86	83.62	71.43	42.20	53.06	68.34	59.53
	SANN	71.98	73.97	87.44	80.14	65.51	43.67	52.41	66.27	43.99
	SASA	62.18	66.94	73.56	70.10	52.84	44.91	48.55	59.32	66.43
	Semantria	81.59	82.95	89.45	86.08	78.64	67.86	72.85	79.46	59.45
	SenticNet	69.91	79.99	65.30	71.90	60.55	76.52	67.60	69.75	97.48
	Sentiment140	77.45	92.35	63.89	75.53	68.43	93.67	79.08	77.31	26.90
	Sentiment140.L	62.92	75.38	54.56	63.30	53.74	74.76	62.53	62.91	90.17
	SentiStrength	90.52	92.24	95.51	93.85	84.31	75.00	79.38	86.62	19.58
	SentiWordNet	72.89	77.52	82.35	79.86	62.42	55.11	58.54	69.20	53.85
	SO-CAL	78.23	81.45	84.66	83.02	72.18	67.36	69.69	76.35	71.52
Stanford DM	68.53	89.26	54.54	67.71	56.38	89.96	69.31	68.51	80.28	
Umigon	72.26	85.42	68.89	76.27	57.90	78.44	66.62	71.45	51.33	
VADER	77.05	77.28	88.99	82.72	76.48	57.77	65.82	74.27	71.33	
Tweets_DBT	AFINN	71.08	58.32	83.71	68.74	86.38	63.34	73.09	70.92	59.58
	ANEW_SUB	53.97	42.46	83.71	56.34	80.75	37.61	51.32	53.83	89.14
	Emolex	63.28	48.43	75.92	59.14	81.33	56.48	66.67	62.90	58.77
	Emoticons	73.91	66.67	90.91	76.92	87.50	58.33	70.00	73.46	1.16
	Emoticons DS	37.41	37.16	100.00	54.18	100.00	0.64	1.28	27.73	99.55
	NRC Hashtag	65.31	52.53	23.60	32.57	67.73	88.26	76.64	54.61	94.09
	LIWC07	64.64	56.44	96.19	71.14	92.42	38.50	54.35	62.75	61.45
	LIWC15	69.36	58.17	87.19	69.78	86.73	57.19	68.93	69.35	54.42
	Opinion Finder	72.93	56.72	63.68	60.00	81.97	77.26	79.55	69.77	33.60
	Opinion Lexicon	73.98	62.13	82.05	70.71	86.09	68.97	76.59	73.65	58.06
	PANAS-t	79.59	43.75	87.50	58.33	96.97	78.05	86.49	72.41	2.48
	Pattern.en	64.07	53.61	91.69	67.66	88.60	44.88	59.58	63.62	45.98
	SANN	65.87	50.14	80.84	61.90	85.30	58.05	69.09	65.49	31.53
	SASA	63.17	50.93	73.15	60.06	77.74	57.08	65.83	62.94	59.68
	Semantria	75.94	65.46	80.16	72.07	85.38	73.27	78.86	75.46	49.97
	SenticNet	64.96	52.19	54.67	53.40	72.95	70.93	71.93	62.66	78.02
	Sentiment140	79.51	63.75	85.00	72.86	91.47	76.89	83.55	78.20	18.75
	Sentiment140.L	64.83	51.49	74.96	61.05	80.19	58.94	67.94	64.49	91.66
	SentiStrength	77.88	62.76	69.47	65.94	85.71	81.63	83.62	74.78	21.48
	SentiWordNet	61.98	46.83	72.84	57.01	79.64	56.24	65.93	61.47	48.91
	SO-CAL	72.96	61.36	75.70	67.78	82.98	71.31	76.70	72.24	57.55
Stanford DM	71.31	75.89	28.52	41.46	70.60	94.99	81.00	61.23	84.54	
Umigon	76.62	66.45	73.50	69.80	83.59	78.44	80.93	75.37	38.91	
VADER	69.43	55.60	84.89	67.19	87.25	60.39	71.38	69.29	68.92	
Tweets_RND_I	AFINN	80.32	79.38	90.84	84.72	82.39	64.47	72.34	78.53	71.47
	ANEW_SUB	67.66	65.46	95.81	77.78	81.69	27.02	40.61	59.19	95.24
	Emolex	73.28	74.49	83.19	78.60	70.93	59.03	64.43	71.52	59.02
	Emoticons	85.43	90.27	90.27	90.27	71.05	71.05	71.05	80.66	13.19
	Emoticons DS	58.95	58.84	99.63	73.99	72.22	1.37	2.70	38.34	99.83
	NRC Hashtag	65.61	72.95	65.91	69.26	57.31	65.19	61.00	65.13	95.54
	LIWC07	59.92	62.41	79.37	69.87	52.66	32.43	40.14	55.01	54.61
	LIWC15	84.83	84.00	94.47	88.93	87.03	67.34	75.93	82.43	67.41
	Opinion Finder	77.16	82.14	78.04	80.04	70.90	75.92	73.32	76.68	40.37
	Opinion Lexicon	81.56	82.00	87.68	84.74	80.84	72.98	76.71	80.73	63.74
	PANAS-t	85.45	91.18	86.11	88.57	76.19	84.21	80.00	84.29	4.81
	Pattern.en	81.44	79.86	94.98	86.77	86.50	57.30	68.94	77.85	66.62
	SANN	76.00	74.82	87.32	80.59	78.34	60.96	68.56	74.57	36.22
	SASA	65.60	70.72	70.36	70.54	58.47	58.89	58.68	64.61	58.67
	Semantria	83.98	85.94	87.75	86.83	80.85	78.28	79.54	83.19	58.63
	SenticNet	70.90	75.79	70.92	73.28	65.45	70.87	68.05	70.66	78.51
	Sentiment140	88.52	88.83	94.02	91.35	87.85	78.52	82.92	87.14	49.85
	Sentiment140.L	75.91	79.00	80.47	79.72	71.30	69.40	70.34	75.03	95.76
	SentiStrength	93.72	94.26	96.33	95.28	92.61	88.68	90.60	92.94	27.13
	SentiWordNet	70.70	76.03	77.64	76.83	61.27	59.11	60.17	68.50	62.78
	SO-CAL	80.85	82.08	85.98	83.98	78.92	73.66	76.20	80.09	64.57
Stanford DM	54.19	87.02	25.40	39.33	47.44	94.67	63.21	51.27	92.70	
Umigon	82.07	89.22	80.71	84.76	73.02	84.26	78.24	81.50	67.50	
VADER	80.29	78.90	91.90	84.91	83.58	62.65	71.62	78.26	80.47	
Tweets_RND_II	AFINN	96.37	97.66	96.94	97.30	93.75	95.19	94.47	95.88	80.77
	ANEW_SUB	81.36	80.52	96.38	87.74	85.44	47.64	61.17	74.45	93.35
	Emolex	86.06	89.82	89.11	89.47	78.77	80.00	79.38	84.42	63.58
	Emoticons	97.75	97.90	99.42	98.65	96.97	89.72	93.20	95.93	14.82
	Emoticons DS	71.04	70.61	99.90	82.74	95.83	5.43	10.28	46.51	99.09
	NRC Hashtag	67.37	83.76	65.43	73.47	48.17	71.69	57.62	65.55	91.94
	LIWC07	66.47	74.46	78.81	76.58	44.20	38.31	41.04	58.81	73.93
	LIWC15	96.44	97.09	98.04	97.56	94.68	92.23	93.44	95.50	77.05
	Opinion Finder	78.32	93.86	71.11	80.92	63.42	91.50	74.92	77.92	41.23
	Opinion Lexicon	93.45	97.03	93.14	95.04	86.93	94.11	90.38	92.71	70.64
	PANAS-t	90.71	96.95	88.19	92.36	82.11	95.12	88.14	90.25	5.39
	Pattern.en	91.76	92.94	96.19	94.54	87.86	79.06	83.23	88.88	70.85
	SANN	84.46	89.28	87.67	88.47	74.77	77.63	76.17	82.32	38.94
	SASA	70.06	82.81	72.81	77.49	49.05	63.39	55.30	66.40	63.04
	Semantria	91.61	96.94	90.55	93.64	82.25	93.88	87.68	90.66	63.61
	SenticNet	73.64	90.74	68.45	78.03	55.41	84.88	67.05	72.54	82.82
	Sentiment140	94.75	97.10	95.71	96.40	88.64	92.13	90.35	93.37	49.95
	Sentiment140.L	78.05	88.68	78.31	83.17	61.32	77.47	68.45	75.81	93.28
	SentiStrength	96.97	98.92	96.43	97.66	93.54	98.01	95.72	96.69	34.65
	SentiWordNet	78.57	87.88	80.91	84.25	61.09	72.87	66.46	75.36	61.49
	SO-CAL	87.76	94.25	86.99	90.47	77.34	89.32	82.90	86.68	67.18
Stanford DM	60.46	94.48	44.87	60.84	44.06	94.30	60.06	60.45	88.89	
Umigon	88.63	97.73	85.92	91.45	73.64	95.17	83.03	87.24	70.83	
VADER	99.04	99.16	99.45	99.31	98.77	98.12	98.45	98.88	94.40	

Table 4: 2-classes experiments results with 4 datasets

Dataset	Method	Accur.	Posit. Sentiment			Negat. Sentiment			MacroF1	Coverage
			P	R	F1	P	R	F1		
Tweets _RND_III	AFINN	86.66	87.38	91.11	89.21	85.43	79.84	82.54	85.87	78.81
	ANEW.SUB	73.38	70.53	96.74	81.58	87.89	36.95	52.02	66.80	94.30
	Emolex	82.02	83.90	87.55	85.69	78.64	73.19	75.82	80.75	67.07
	Emoticons	92.74	94.66	95.38	95.02	87.50	85.71	86.60	90.81	14.59
	Emoticons DS	61.98	61.51	99.73	76.09	90.00	3.77	7.23	41.66	99.02
	NRC Hashtag	79.28	84.99	80.22	82.54	71.52	77.80	74.53	78.53	95.19
	LIWC07	60.65	63.82	77.81	70.12	52.35	35.60	42.38	56.25	50.12
	LIWC15	92.17	91.76	96.50	94.07	93.02	84.34	88.47	91.27	75.96
	Opinion Finder	81.71	88.64	79.87	84.03	73.48	84.50	78.60	81.32	40.99
	Opinion Lexicon	88.21	88.43	92.79	90.56	87.82	81.07	84.31	87.43	70.50
	PANAS-t	94.05	95.38	96.88	96.12	89.47	85.00	87.18	91.65	6.85
	Pattern.en	87.58	87.00	95.47	91.04	89.11	72.22	79.78	85.41	73.51
	SANN	79.69	79.53	88.60	83.82	80.00	66.67	72.73	78.27	42.14
	SASA	76.94	80.44	81.41	80.92	71.52	70.21	70.86	75.89	67.16
	Semantria	90.49	92.90	91.81	92.35	86.58	88.27	87.42	89.89	66.83
	SenticNet	77.99	84.95	77.56	81.09	69.29	78.65	73.67	77.38	95.52
	Sentiment140	96.95	98.96	96.22	97.57	93.67	98.23	95.90	96.73	50.77
	Sentiment140.L	81.68	87.83	80.85	84.19	73.99	82.94	78.21	81.20	95.19
	SentiStrength	94.99	96.27	96.57	96.42	91.97	91.30	91.64	94.03	37.41
	SentiWordNet	72.54	79.19	78.75	78.97	60.14	60.76	60.45	69.71	67.97
	SO-CAL	88.27	90.73	90.25	90.49	84.33	85.06	84.69	87.59	74.33
Stanford DM	65.73	94.06	45.09	60.96	54.46	95.84	69.46	65.21	86.80	
Umigon	86.86	92.84	85.36	88.95	78.96	89.30	83.81	86.38	80.03	
VADER	87.08	87.01	92.77	89.80	87.19	78.05	82.37	86.08	86.39	
Tweets _RND_IV	AFINN	76.77	76.15	86.84	81.15	77.94	63.10	69.74	75.44	71.22
	ANEW.SUB	65.28	63.80	92.16	75.40	72.73	28.57	41.03	58.21	95.32
	Emolex	72.56	75.93	81.19	78.47	66.07	58.73	62.18	70.33	58.99
	Emoticons	94.52	98.18	91.53	94.74	90.83	98.02	94.29	94.51	78.78
	Emoticons DS	57.82	57.72	99.37	73.02	66.67	1.71	3.33	38.18	98.92
	NRC Hashtag	61.83	67.36	64.67	65.99	55.08	58.04	56.52	61.25	94.24
	LIWC07	67.97	70.30	78.89	74.35	63.46	52.38	57.39	65.87	55.04
	LIWC15	93.97	92.36	97.79	95.00	96.59	88.54	92.39	93.70	83.45
	Opinion Finder	70.34	75.00	73.91	74.45	64.00	65.31	64.65	69.55	42.45
	Opinion Lexicon	79.35	79.17	87.96	83.33	79.69	67.11	72.86	78.10	66.19
	PANAS-t	56.52	63.64	53.85	58.33	50.00	60.00	54.55	56.44	8.27
	Pattern.en	93.23	92.76	95.92	94.31	93.94	89.42	91.63	92.97	90.29
	SANN	71.88	70.77	85.19	77.31	74.19	54.76	63.01	70.16	34.53
	SASA	64.16	67.96	70.71	69.31	58.57	55.41	56.94	63.13	62.23
	Semantria	91.74	94.83	90.16	92.44	88.24	93.75	90.91	91.67	78.42
	SenticNet	82.85	90.60	77.94	83.79	75.41	89.32	81.78	82.79	85.97
	Sentiment140	88.89	91.40	89.47	90.43	85.51	88.06	86.76	88.60	58.27
	Sentiment140.L	84.03	90.30	80.67	85.21	77.52	88.50	82.64	83.93	94.60
	SentiStrength	89.77	92.06	93.55	92.80	84.00	80.77	82.35	87.58	31.65
	SentiWordNet	66.67	72.73	74.23	73.47	56.14	54.24	55.17	64.32	56.12
	SO-CAL	75.53	73.50	85.15	78.90	78.87	64.37	70.89	74.89	67.63
Stanford DM	61.51	83.82	39.86	54.03	53.26	89.91	66.89	60.46	90.65	
Umigon	91.25	95.65	88.59	91.99	86.40	94.74	90.38	91.18	94.60	
VADER	84.98	82.63	93.88	87.90	89.53	72.64	80.21	84.05	91.01	
Tweets _STF	AFINN	84.42	80.62	91.49	85.71	89.66	77.04	82.87	84.29	76.88
	ANEW.SUB	68.05	63.08	93.18	75.23	84.62	40.74	55.00	65.11	94.15
	Emolex	79.65	76.09	88.98	82.03	85.23	69.44	76.53	79.28	62.95
	Emoticons	85.42	80.65	96.15	87.72	94.12	72.73	82.05	84.89	13.37
	Emoticons DS	51.96	51.41	100.00	67.91	100.00	2.27	4.44	36.18	99.72
	NRC Hashtag	71.30	73.05	70.93	71.98	69.51	71.70	70.59	71.28	92.20
	LIWC07	64.29	63.75	76.12	69.39	65.22	50.85	57.14	63.27	70.39
	LIWC15	89.22	84.18	97.08	90.17	96.40	81.06	88.07	89.12	74.93
	Opinion Finder	80.77	81.16	76.71	78.87	80.46	84.34	82.35	80.61	43.45
	Opinion Lexicon	86.10	83.67	91.11	87.23	89.29	80.65	84.75	85.99	72.14
	PANAS-t	94.12	88.89	100.00	94.12	100.00	88.89	94.12	94.12	4.74
	Pattern.en	79.55	74.86	94.48	83.54	90.12	61.34	73.00	78.27	73.54
	SANN	73.21	69.35	82.69	75.44	78.82	63.81	70.53	72.98	58.22
	SASA	68.52	65.65	78.90	71.67	72.94	57.94	64.58	68.12	60.17
	Semantria	88.45	89.15	88.46	88.80	87.70	88.43	88.07	88.43	69.92
	SenticNet	70.49	71.31	63.50	67.18	69.88	76.82	73.19	70.18	80.22
	Sentiment140	93.29	91.36	94.87	93.08	95.18	91.86	93.49	93.29	45.68
	Sentiment140.L	79.12	81.48	76.30	78.81	76.97	82.04	79.42	79.11	94.71
	SentiStrength	95.33	95.18	96.34	95.76	95.52	94.12	94.81	95.29	41.78
	SentiWordNet	72.99	73.17	78.95	75.95	72.73	65.98	69.19	72.57	58.77
	SO-CAL	87.36	82.89	93.33	87.80	92.80	81.69	86.89	87.35	77.16
Stanford DM	66.56	87.69	36.31	51.35	61.24	95.18	74.53	62.94	89.97	
Umigon	86.99	91.73	81.88	86.52	83.02	92.31	87.42	86.97	81.34	
VADER	84.44	80.23	92.21	85.80	90.40	76.35	82.78	84.29	84.12	
Tweets _SAN	AFINN	77.85	72.73	86.72	79.11	84.83	69.54	76.43	77.77	69.94
	ANEW.SUB	59.82	54.08	95.69	69.11	88.02	28.05	42.55	55.83	90.56
	Emolex	72.06	65.42	85.67	74.19	82.61	60.06	69.55	71.87	60.04
	Emoticons	85.71	87.50	89.74	88.61	82.61	79.17	80.85	84.73	5.77
	Emoticons DS	47.20	47.13	99.21	63.90	55.56	0.88	1.74	32.82	98.08
	NRC Hashtag	69.77	72.01	58.71	64.69	68.36	79.63	73.57	69.13	93.68
	LIWC07	77.27	71.37	92.05	80.40	88.38	62.10	72.95	76.67	63.70
	LIWC15	79.18	73.82	91.98	81.90	88.64	65.73	75.48	78.69	66.91
	Opinion Finder	68.60	63.54	71.35	67.22	73.80	66.35	69.87	68.55	34.74
	Opinion Lexicon	81.77	78.18	86.74	82.24	85.98	77.05	81.27	81.75	65.35
	PANAS-t	84.62	80.00	80.00	80.00	87.50	87.50	87.50	83.75	2.38
	Pattern.en	77.23	72.25	91.91	80.90	87.23	61.01	71.80	76.35	64.80
	SANN	67.35	61.98	85.79	71.96	78.57	49.75	60.92	66.44	35.66
	SASA	61.18	61.74	74.71	67.61	60.12	45.16	51.58	59.59	43.45
	Semantria	78.91	76.42	82.85	79.50	81.79	75.08	78.29	78.90	57.38
	SenticNet	66.51	65.31	57.73	61.29	67.33	73.96	70.49	65.89	77.45
	Sentiment140	85.27	82.21	88.89	85.42	88.65	81.85	85.12	85.27	44.18
	Sentiment140.L	72.26	71.06	69.01	70.02	73.26	75.14	74.19	72.10	94.50
	SentiStrength	89.47	88.70	91.81	90.23	90.41	86.84	88.59	89.41	29.61
	SentiWordNet	67.49	64.25	75.63	69.48	71.90	59.70	65.23	67.35	59.21
	SO-CAL	79.70	74.74	84.55	79.34	85.11	75.56	80.05	79.70	68.19
Stanford DM	62.72	87.60	22.60	35.93	59.35	97.25	73.71	54.82	92.94	
Umigon	82.41	83.66	80.49	82.04	81.25	84.32	82.76	82.40	67.74	
VADER	77.28	71.76	88.54	79.27	85.76	66.44	74.87	77.07	78.28	

Table 5: 2-classes experiments results with 2 datasets

Dataset	Method	Accur.	Posit. Sentiment			Negat. Sentiment			MacroF1	Coverage
			P	R	F1	P	R	F1		
Tweets _Semeval	AFINN	86.05	90.95	90.01	90.48	72.88	75.00	73.93	82.20	76.83
	ANEW_SUB	77.63	77.91	97.01	86.42	74.62	24.22	36.57	61.49	98.30
	Emolex	79.82	86.58	86.48	86.53	59.70	59.93	59.81	73.17	70.29
	Emoticons	92.24	95.09	95.45	95.27	78.95	77.59	78.26	86.77	10.52
	Emoticons DS	72.75	72.72	100.00	84.20	100.00	0.36	0.71	42.46	100.00
	NRC Hashtag	72.15	83.82	76.83	80.17	48.25	59.29	53.20	66.69	96.80
	LIWC07	64.54	74.33	78.88	76.54	30.19	25.12	27.42	51.98	53.17
	LIWC15	87.40	90.23	93.60	91.88	76.77	67.61	71.90	81.89	72.39
	Opinion Finder	75.95	90.13	74.02	81.28	56.40	80.57	66.35	73.82	38.86
	Opinion Lexicon	86.20	92.07	88.90	90.46	71.75	78.65	75.04	82.75	69.61
	PANAS-t	91.76	96.63	93.49	95.04	70.21	82.50	75.86	85.45	8.33
	Pattern.en	84.28	89.04	90.95	89.99	66.00	61.08	63.44	76.71	70.69
	SANN	78.94	83.35	87.97	85.60	65.64	56.68	60.83	73.21	38.17
	SASA	75.63	81.44	87.26	84.25	52.31	41.26	46.13	65.19	53.24
	Semantria	85.25	94.17	85.40	89.57	66.97	84.84	74.85	82.21	65.82
	SenticNet	75.00	82.35	77.78	80.00	63.64	70.00	66.67	73.33	1.83
	Sentiment140	91.07	96.13	92.17	94.11	76.57	87.33	81.60	87.85	52.35
	Sentiment140.L	74.59	86.83	76.86	81.54	52.24	68.46	59.26	70.40	96.73
	SentiStrength	91.11	96.17	91.78	93.93	78.40	89.09	83.40	88.66	28.66
	SentiWordNet	69.93	86.53	72.04	78.62	40.52	62.93	49.29	63.96	70.20
	SO-CAL	82.52	90.17	85.03	87.53	66.28	76.05	70.83	79.18	69.93
	Stanford DM	41.13	94.17	19.78	32.70	31.64	96.81	47.69	40.19	92.32
	Umigon	81.44	94.98	79.34	86.46	59.02	87.64	70.54	78.50	68.86
	VADER	86.11	89.78	91.51	90.64	75.19	71.18	73.13	81.88	85.42
RW	AFINN	82.25	83.16	93.98	88.24	78.63	53.80	63.89	76.06	83.12
	ANEW_SUB	71.51	71.47	97.88	82.62	72.22	12.38	21.14	51.88	96.60
	Emolex	74.54	79.14	86.39	82.60	59.69	46.95	52.56	67.58	77.45
	Emoticons	88.89	91.30	95.45	93.33	75.00	60.00	66.67	80.00	15.32
	Emoticons DS	69.23	69.05	100.00	81.69	100.00	1.82	3.57	42.63	99.57
	NRC Hashtag	65.06	81.10	63.52	71.24	46.71	68.35	55.49	63.37	97.02
	LIWC07	83.18	83.12	96.77	89.43	83.54	45.52	58.93	74.18	77.59
	LIWC15	83.87	83.89	96.86	89.91	83.75	46.53	59.82	74.87	79.15
	Opinion Finder	61.30	79.91	58.81	67.75	42.04	66.90	51.63	59.69	65.25
	Opinion Lexicon	80.25	83.89	89.03	86.39	69.50	59.39	64.05	75.22	79.01
	PANAS-t	63.64	80.00	64.52	71.43	42.11	61.54	50.00	60.71	12.48
	Pattern.en	82.63	84.20	95.03	89.29	73.02	42.99	54.12	71.70	63.69
	SANN	77.99	83.85	86.10	84.96	61.19	56.94	58.99	71.98	36.74
	SASA	66.00	78.04	71.33	74.53	44.83	53.72	48.87	61.70	56.74
	Semantria	84.16	90.46	87.03	88.71	70.29	76.98	73.48	81.10	62.70
	SenticNet	66.98	86.36	61.43	71.79	48.62	79.00	60.19	65.99	89.79
	Sentiment140	83.26	93.36	81.40	86.97	68.23	87.33	76.61	81.79	67.80
	Sentiment140.L	69.85	88.22	65.18	74.97	50.60	80.38	62.11	68.54	96.45
	SentiStrength	85.89	93.69	86.67	90.04	69.23	83.72	75.79	82.92	23.12
	SentiWordNet	68.94	80.90	74.21	77.41	45.92	55.56	50.28	63.85	81.28
	SO-CAL	76.03	86.12	78.15	81.94	58.74	71.18	64.36	73.15	79.29
	Stanford DM	43.10	96.25	17.46	29.56	35.58	98.53	52.28	40.92	91.49
	Umigon	60.32	91.43	48.12	63.05	42.02	89.29	57.14	60.10	80.43
	VADER	81.75	81.85	95.28	88.06	81.25	49.19	61.28	74.67	89.36

Table 6: 3-classes experiments results with 4 datasets

Dataset	Method	Accur.	Posit. Sentiment			Negat. Sentiment			Neut. Sentiment			MacroF1
			P	R	F1	P	R	F1	P	R	F1	
Comments _BBC	AFINN	50.10	16.22	60.61	25.59	82.62	56.05	66.79	40.11	30.24	34.48	42.29
	ANEW_SUB	24.30	11.38	91.92	20.24	84.15	21.13	33.78	38.89	5.65	9.86	21.30
	Emolex	44.10	15.51	65.66	25.10	83.19	45.48	58.81	35.27	31.85	33.47	39.13
	Emoticons	24.60	0.00	0.00	0.00	33.33	0.15	0.30	19.77	98.79	32.95	11.09
	Emoticons DS	10.00	9.85	98.99	17.92	66.67	0.31	0.61	0.00	0.00	0.00	6.18
	NRC Hashtag	64.00	20.72	23.23	21.90	70.20	91.27	79.36	52.50	8.47	14.58	38.62
	LIWC07	33.00	11.11	42.42	17.61	67.69	33.69	44.99	22.90	27.42	24.95	29.18
	LIWC15	43.70	17.94	68.69	28.45	85.06	42.73	56.88	30.72	36.29	33.27	39.53
	Opinion Finder	51.80	14.96	35.35	21.02	78.76	60.18	68.23	33.71	36.29	34.95	41.40
	Opinion Lexicon	55.00	20.67	62.63	31.08	85.27	59.42	70.04	40.82	40.32	40.57	47.23
	PANAS-t	27.10	16.67	6.06	8.89	75.61	4.75	8.93	25.35	94.35	39.97	19.26
	Pattern.en	28.70	14.25	58.59	22.92	82.61	17.46	28.82	25.27	46.37	32.72	28.16
	SANN	33.80	13.75	33.33	19.47	82.25	21.29	33.82	28.09	66.94	39.57	30.95
	SASA	38.20	17.03	47.47	25.07	70.75	36.29	47.98	25.19	39.52	30.77	34.60
	Semantria	56.00	28.90	50.51	36.76	83.82	57.12	67.94	35.86	55.24	43.49	49.40
	SenticNet	47.10	17.74	66.67	28.03	72.87	57.58	64.33	25.89	11.69	16.11	36.16
	Sentiment140	40.00	17.75	30.30	22.39	79.77	31.39	45.05	28.75	66.53	40.15	35.86
	Sentiment140_L	43.10	13.32	65.66	22.15	73.84	53.60	62.11	42.11	6.45	11.19	31.82
	SentiStrength	44.20	47.37	18.18	26.28	86.64	32.77	47.56	29.37	84.68	43.61	39.15
	SentiWordNet	42.40	14.90	59.60	23.84	81.63	41.50	55.03	34.56	37.90	36.15	38.34
	SO-CAL	55.50	20.88	57.58	30.65	80.47	63.09	70.73	28.57	34.68	31.33	44.23
Stanford DM	65.50	43.37	36.36	39.56	71.01	89.28	79.10	37.50	14.52	20.93	46.53	
Umigon	45.70	28.35	36.36	31.86	76.35	41.04	53.39	29.31	61.69	39.74	41.66	
VADER	49.40	16.36	71.72	26.64	83.02	54.67	65.93	48.53	26.61	34.38	42.31	
Comments _Digg	AFINN	52.09	33.78	60.00	43.22	80.06	50.52	61.95	42.57	49.49	45.77	50.31
	ANEW_SUB	33.89	22.67	85.71	35.86	73.66	23.95	36.15	49.48	16.27	24.49	32.16
	Emolex	43.64	25.00	43.33	31.71	75.16	40.73	52.83	36.23	49.49	41.83	42.13
	Emoticons	28.69	61.90	6.19	11.26	60.00	1.05	2.06	21.71	98.31	35.56	16.29
	Emoticons DS	20.98	19.92	99.05	33.17	66.67	1.75	3.41	44.44	2.71	5.11	13.90
	NRC Hashtag	53.57	35.02	36.19	35.60	60.57	81.64	69.55	38.20	11.53	17.71	40.95
	LIWC07	31.10	20.45	34.76	25.75	51.12	23.95	32.62	27.65	42.37	33.47	30.61
	LIWC15	47.54	36.83	61.90	46.18	80.97	37.94	51.67	36.18	55.93	43.94	47.26
	Opinion Finder	46.24	32.69	32.38	32.54	71.64	42.83	53.61	35.10	62.71	45.01	43.72
	Opinion Lexicon	49.77	34.67	57.62	43.29	78.43	47.03	58.80	37.92	49.49	42.94	48.34
	PANAS-t	28.23	11.11	0.48	0.91	66.67	2.80	5.37	27.49	97.29	42.87	16.38
	Pattern.en	41.60	33.59	61.43	43.43	79.65	23.95	36.83	34.93	61.69	44.61	41.62
	SANN	37.05	28.52	35.71	31.71	69.64	20.45	31.62	32.04	70.17	44.00	35.78
	SASA	43.36	29.81	44.29	35.63	64.25	44.93	52.88	32.05	39.66	35.45	41.32
	Semantria	50.51	45.89	50.48	48.07	79.75	44.76	57.33	34.67	61.69	44.39	49.93
	SenticNet	49.95	33.71	71.43	45.80	63.28	65.38	64.32	34.15	4.75	8.33	39.48
	Sentiment140	41.50	46.39	21.43	29.32	75.64	30.94	43.92	30.16	76.27	43.23	38.82
	Sentiment140_L	48.75	29.75	61.90	40.19	67.78	60.31	63.83	38.17	16.95	23.47	42.50
	SentiStrength	42.53	64.00	22.86	33.68	85.71	26.22	40.16	31.44	88.14	46.35	40.06
	SentiWordNet	42.15	27.53	41.43	33.08	73.43	34.79	47.21	34.29	56.95	42.80	41.03
	SO-CAL	53.57	38.54	52.86	44.58	75.47	55.94	64.26	28.57	49.49	36.23	48.35
Stanford DM	45.14	25.00	15.71	19.29	54.74	68.85	60.99	26.11	19.92	22.60	34.29	
Umigon	53.57	52.97	46.67	49.62	71.62	54.72	62.04	36.48	56.27	44.27	51.98	
VADER	53.30	32.96	69.52	44.72	81.64	52.10	63.61	48.33	44.07	46.10	51.47	
Comments _NYT	AFINN	42.45	64.81	41.79	50.81	80.29	39.82	53.24	7.89	77.87	14.32	39.46
	ANEW_SUB	51.12	48.35	88.57	62.55	79.65	24.69	37.69	7.92	9.84	8.78	36.34
	Emolex	42.97	55.12	53.72	54.41	75.35	33.33	46.22	7.22	54.10	12.74	37.79
	Emoticons	4.68	0.00	0.00	0.00	0.00	0.00	0.00	4.47	99.59	8.56	2.85
	Emoticons DS	42.58	42.55	99.77	59.66	78.57	0.40	0.80	0.00	0.00	0.00	20.15
	NRC Hashtag	54.84	55.38	45.74	50.10	61.55	65.68	63.55	8.33	15.16	10.76	41.47
	LIWC07	24.35	42.88	27.72	33.67	53.42	19.07	28.11	4.67	53.28	8.58	23.45
	LIWC15	36.49	65.29	40.29	49.83	81.50	29.25	43.05	7.17	83.61	13.20	35.36
	Opinion Finder	29.38	68.77	18.78	29.51	76.52	32.68	45.80	6.29	88.11	11.75	29.02
	Opinion Lexicon	44.57	65.95	43.15	52.17	79.81	43.11	55.98	7.94	73.77	14.34	40.83
	PANAS-t	5.88	69.23	1.23	2.41	62.07	1.31	2.57	4.75	99.18	9.07	4.68
	Pattern.en	31.60	55.23	45.05	49.63	72.80	17.76	28.55	5.88	65.57	10.79	29.66
	SANN	27.44	56.61	28.95	38.31	77.69	21.59	33.79	5.88	79.51	10.94	27.68
	SASA	30.04	49.92	30.13	37.58	59.11	27.21	37.26	5.74	61.07	10.49	28.44
	Semantria	44.59	70.60	41.83	52.54	80.54	44.24	57.11	7.53	73.36	13.65	41.10
	SenticNet	61.85	58.19	59.48	58.83	65.01	69.26	67.07	0.00	0.00	0.00	41.97
	Sentiment140	13.58	77.32	6.81	12.51	75.40	11.96	20.65	4.98	93.03	9.45	14.20
	Sentiment140_L	54.61	54.72	59.12	56.84	67.00	54.41	60.05	6.70	15.98	9.44	42.11
	SentiStrength	18.17	78.51	8.62	15.54	81.12	18.96	30.74	5.41	95.49	10.24	18.84
	SentiWordNet	32.20	57.35	34.53	43.10	70.31	26.95	38.97	6.08	70.08	11.19	31.09
	SO-CAL	50.79	64.36	51.13	56.99	77.25	49.16	60.08	8.68	65.98	15.34	44.14
Stanford DM	51.93	73.39	21.14	32.83	59.48	77.90	67.46	9.65	38.11	15.40	38.56	
Umigon	24.08	68.76	16.38	26.46	68.78	24.51	36.14	5.88	88.93	11.04	24.54	
VADER	48.03	62.67	51.63	56.62	79.91	43.07	55.97	9.18	71.31	16.26	42.95	
Comments _TED	AFINN	54.11	62.78	69.50	65.97	75.74	43.52	55.28	21.83	49.11	30.22	50.49
	ANEW_SUB	46.25	42.79	88.68	57.73	71.53	23.96	35.90	18.60	7.14	10.32	34.65
	Emolex	45.77	54.49	61.01	57.57	68.78	34.47	45.93	17.63	43.75	25.13	42.87
	Emoticons	14.66	100.00	0.94	1.87	88.89	1.96	3.83	11.93	100.00	21.31	9.00
	Emoticons DS	37.90	37.90	100.00	54.97	0.00	0.00	0.00	0.00	0.00	0.00	18.32
	NRC Hashtag	57.69	57.54	51.57	54.39	63.86	76.04	69.42	13.43	8.04	10.06	44.62
	LIWC07	32.66	41.00	38.68	39.81	54.59	24.69	34.01	14.12	44.64	21.46	31.76
	LIWC15	48.27	67.11	63.52	65.27	71.66	32.76	44.97	19.66	61.61	29.81	46.68
	Opinion Finder	42.31	59.31	38.05	46.36	64.75	44.01	52.40	15.13	48.21	23.03	40.60
	Opinion Lexicon	54.47	62.76	67.30	64.95	72.97	46.21	56.59	22.59	48.21	30.77	50.77
	PANAS-t	14.78	90.00	2.83	5.49	55.56	1.22	2.39	13.41	98.21	23.61	10.50
	Pattern.en	42.43	56.78	69.81	62.62	65.04	19.56	30.08	16.62	48.21	24.71	39.14
	SANN	48.87	60.62	55.66	58.03	68.27	45.23	54.41	17.39	42.86	24.74	45.73
	SASA	40.52	51.77	50.63	51.19	63.80	34.47	44.76	12.38	33.93	18.14	38.03
	Semantria	48.15	64.84	63.21	64.01	68.44	37.65	48.58	16.12	43.75	23.56	45.38
	SenticNet	60.43	54.83	76.73	63.96	68.67	64.30	66.41	0.00	0.00	0.00	43.46
	Sentiment140	25.98	73.49	19.18	30.42	68.82	15.65	25.50	14.03	83.04	24.00	26.64
	Sentiment140_L	50.06	46.90	68.87	55.80	63.64	46.21	53.54	16.00	10.71	12.83	40.72
	SentiStrength	33.61	80.45	33.65	47.45	75.25	18.58	29.80	16.36	88.39	27.62	34.96
	SentiWordNet	36.11	50.15	51.89	51.00	55.41	20.05	29.44	15.47	50.00	23.63	34.69
	SO-CAL	52.68	65.01	70.13	67.47	64.56	44.99	53.03	14.23	31.25	19.55	46.68
Stanford DM	55.66	76.30	50.63	60.87	60.13	70.42	64.86	12.08	16.07	13.79	46.51	
Umigon	40.52	68.49	51.26	58.63	58.96	24.94	35.05	17.52	66.96	27.78	40.49	
VADER	57.45	60.61	74.53	66.85	71.86	51.83	60.23	21.57	29.46	24.91	50.66	

Table 7: 3-classes experiments results with 4 datasets

Dataset	Method	Accur.	Posit. Sentiment			Negat. Sentiment			Neut. Sentiment			MacroF1
			P	R	F1	P	R	F1	P	R	F1	
Comments _YTB	AFINN	59.52	70.31	71.53	70.91	59.14	46.81	52.26	43.22	49.03	45.94	56.37
	ANEW_SUB	54.12	56.36	85.71	68.00	54.24	29.20	37.97	41.77	19.79	26.86	44.28
	Emolex	48.66	65.82	49.97	56.81	49.02	38.98	43.43	34.38	54.05	42.03	47.42
	Emoticons	32.55	74.09	10.99	19.14	37.21	2.09	3.95	22.60	93.33	36.39	19.83
	Emoticons DS	49.16	49.39	97.96	65.67	45.45	1.30	2.53	40.96	3.49	6.43	24.88
	NRC Hashtag	50.19	71.46	57.30	63.60	36.80	80.18	50.45	35.16	14.46	20.49	44.85
	LIWC07	40.97	52.93	52.67	52.80	26.79	16.56	20.47	30.72	40.21	34.83	36.03
	LIWC15	61.29	72.73	74.65	73.68	64.26	40.55	49.72	43.99	54.77	48.79	57.40
	Opinion Finder	42.41	69.84	30.87	42.82	41.98	32.07	36.36	32.85	70.26	44.77	41.32
	Opinion Lexicon	56.74	72.29	63.60	67.67	54.33	44.98	49.22	40.47	54.26	46.36	54.42
	PANAS-t	29.12	51.72	0.90	1.77	46.67	2.74	5.17	28.68	98.05	44.38	17.11
	Pattern.en	57.65	70.55	73.51	72.00	58.76	28.42	38.31	40.12	53.54	45.87	52.06
	SANN	45.61	68.26	41.20	51.39	51.27	23.73	32.44	33.51	70.36	45.40	43.08
	SASA	46.61	66.86	49.31	56.76	34.72	50.07	41.00	35.69	39.28	37.40	45.05
	Semantria	54.98	78.85	56.88	66.09	52.82	42.76	47.26	37.73	61.33	46.72	53.36
	SenticNet	53.86	65.29	77.60	70.91	38.34	68.19	49.08	31.25	2.05	3.85	41.28
	Sentiment140	45.82	79.95	37.12	50.70	50.79	25.29	33.77	33.26	76.82	46.42	43.63
	Sentiment140_L	52.48	62.84	73.03	67.56	39.96	57.63	47.20	35.52	13.33	19.39	44.71
	SentiStrength	51.01	90.27	41.80	57.14	67.38	24.77	36.22	36.19	87.38	51.19	48.18
	SentiWordNet	47.93	67.20	50.33	57.55	39.67	31.55	35.15	35.68	56.72	43.80	45.50
	SO-CAL	57.15	74.11	62.22	67.65	54.36	52.02	53.16	28.65	52.51	37.07	52.63
Stanford DM	47.05	81.84	47.09	59.78	32.80	72.49	45.17	34.88	26.97	30.42	45.12	
Umigon	57.21	79.34	62.28	69.78	44.02	50.85	47.19	43.00	53.54	47.69	54.89	
VADER	61.17	69.30	77.84	73.32	57.96	51.24	54.39	45.98	40.51	43.08	56.93	
Myspace	AFINN	62.25	83.92	68.38	75.35	41.29	48.48	44.60	33.12	50.24	39.92	53.29
	ANEW_SUB	66.09	72.89	88.46	79.92	42.35	27.27	33.18	29.81	14.98	19.94	44.35
	Emolex	52.35	81.59	55.56	66.10	33.11	37.12	35.00	25.54	51.21	34.08	45.06
	Emoticons	26.22	86.75	10.26	18.34	38.46	3.79	6.90	17.18	94.69	29.08	18.11
	Emoticons DS	67.15	67.61	99.00	80.35	0.00	0.00	0.00	40.00	1.93	3.69	28.01
	NRC Hashtag	44.19	86.97	46.58	60.67	18.55	83.33	30.34	31.94	11.11	16.49	35.83
	LIWC07	54.85	77.20	63.68	69.79	27.36	21.97	24.37	26.69	45.89	33.75	42.64
	LIWC15	65.42	85.76	72.93	78.83	48.98	36.36	41.74	34.97	58.45	43.76	54.78
	Opinion Finder	38.71	85.94	30.48	45.01	23.02	24.24	23.62	24.04	75.85	36.51	35.04
	Opinion Lexicon	52.74	83.98	55.27	66.67	33.74	41.67	37.29	25.48	51.21	34.03	45.99
	PANAS-t	26.80	97.33	10.40	18.79	40.00	3.03	5.63	21.13	97.58	34.74	19.72
	Pattern.en	61.00	82.82	68.66	75.08	42.68	26.52	32.71	31.30	57.00	40.41	49.40
	SANN	36.70	82.05	27.35	41.03	33.33	18.94	24.15	22.54	79.71	35.14	33.44
	SASA	39.39	82.33	33.19	47.31	23.10	55.30	32.59	23.53	50.24	32.05	37.32
	Semantria	45.73	85.84	41.45	55.91	35.29	31.82	33.47	24.53	69.08	36.20	41.86
	SenticNet	57.44	78.57	72.08	75.19	22.77	65.91	33.85	33.33	2.42	4.50	37.85
	Sentiment140	53.70	89.81	52.71	66.43	42.17	26.52	32.56	28.21	74.40	40.90	46.63
	Sentiment140_L	63.78	77.37	80.34	78.83	31.05	58.33	40.53	35.94	11.11	16.97	45.44
	SentiStrength	43.61	96.69	33.33	49.58	74.19	17.42	28.22	25.65	95.17	40.41	39.40
	SentiWordNet	52.45	82.50	56.41	67.01	22.47	30.30	25.81	28.72	53.14	37.29	43.37
	SO-CAL	53.99	85.40	54.99	66.90	36.21	47.73	41.18	21.40	54.59	30.75	46.27
Stanford DM	35.35	89.50	27.92	42.56	16.64	76.52	27.33	33.02	34.30	33.65	34.52	
Umigon	56.29	88.82	58.83	70.78	25.76	51.52	34.34	33.65	50.72	40.46	48.53	
VADER	65.42	82.53	76.07	79.17	40.56	43.94	42.18	35.46	43.00	38.86	53.41	
Tweets _DBT	AFINN	45.06	35.38	51.37	41.90	61.16	37.07	46.16	43.70	49.32	46.34	44.80
	ANEW_SUB	34.00	24.94	71.78	37.02	55.37	34.27	42.33	40.93	11.83	18.36	32.57
	Emolex	40.83	27.79	42.33	33.55	58.98	34.19	43.28	41.80	46.54	44.04	40.29
	Emoticons	38.57	29.41	1.37	2.62	43.75	0.56	1.11	27.87	97.86	43.39	15.70
	Emoticons DS	23.32	22.84	99.86	37.17	42.11	0.64	1.26	66.67	1.43	2.80	13.75
	NRC Hashtag	41.07	27.81	21.37	24.17	43.34	84.87	57.37	49.35	9.05	15.30	32.28
	LIWC07	33.45	28.48	72.60	40.91	80.76	20.50	32.69	28.02	23.59	25.61	33.07
	LIWC15	43.02	34.79	52.19	41.75	61.51	29.30	39.70	41.73	51.31	46.03	42.49
	Opinion Finder	43.33	34.62	18.49	24.11	56.82	28.02	37.53	41.13	72.92	52.59	38.08
	Opinion Lexicon	47.10	38.73	49.45	43.44	61.05	39.15	47.71	44.85	53.61	48.84	46.66
	PANAS-t	39.28	23.33	0.96	1.84	71.11	2.56	4.95	38.98	97.93	55.77	20.85
	Pattern.en	41.29	32.60	46.85	38.45	65.85	19.30	29.85	41.36	59.89	48.93	39.07
	SANN	40.89	30.73	23.70	26.76	58.48	19.06	28.74	40.26	72.52	51.77	35.76
	SASA	39.87	30.33	44.79	36.17	51.29	33.55	40.56	40.58	43.29	41.89	39.54
	Semantria	47.47	41.49	42.05	41.77	61.50	35.55	45.05	44.26	62.43	51.80	46.21
	SenticNet	43.21	33.77	42.47	37.62	46.54	55.48	50.62	47.65	31.45	37.89	42.05
	Sentiment140	41.07	34.81	13.97	19.94	63.91	15.45	24.89	39.16	82.21	53.05	32.63
	Sentiment140_L	40.43	30.73	68.49	42.43	51.49	54.12	52.77	44.63	10.56	17.08	37.43
	SentiStrength	43.92	41.36	12.47	19.16	64.34	19.22	29.59	41.25	86.66	55.89	34.88
	SentiWordNet	39.96	28.41	33.42	30.71	52.82	28.50	37.03	40.70	55.12	46.83	38.19
	SO-CAL	47.25	38.76	44.38	41.38	58.75	40.59	48.01	31.23	55.52	39.98	43.12
Stanford DM	44.47	47.09	23.29	31.16	44.02	81.91	57.26	44.67	19.62	27.26	38.56	
Umigon	44.66	40.47	28.49	33.44	57.97	30.58	40.04	41.45	67.99	51.50	41.66	
VADER	44.81	33.41	58.49	42.53	61.83	41.63	49.76	45.04	40.03	42.39	44.89	
Tweets _RND_I	AFINN	56.67	51.35	66.64	58.01	55.39	44.36	49.27	62.54	55.81	58.98	55.42
	ANEW_SUB	41.07	36.48	92.09	52.25	49.90	25.40	33.66	71.01	13.67	22.93	36.28
	Emolex	48.21	43.45	49.48	46.27	45.23	34.46	39.11	52.94	54.02	53.47	46.28
	Emoticons	49.67	68.92	15.22	24.94	49.09	5.69	10.20	32.52	94.67	48.42	27.85
	Emoticons DS	32.93	32.03	99.55	48.47	56.52	1.37	2.67	92.59	2.56	4.98	18.71
	NRC Hashtag	38.64	39.51	63.21	48.62	32.81	61.96	42.90	66.67	10.45	18.06	36.53
	LIWC07	40.74	34.96	43.36	38.71	29.89	17.70	22.24	48.51	50.13	49.31	36.75
	LIWC15	59.10	54.56	70.15	61.38	64.17	38.88	48.43	61.63	61.34	61.48	57.10
	Opinion Finder	54.83	61.57	31.57	41.74	50.26	30.56	38.01	54.16	82.59	65.42	48.39
	Opinion Lexicon	56.29	53.28	55.75	54.49	54.56	46.68	50.31	59.07	61.34	60.19	54.99
	PANAS-t	47.34	72.09	4.63	8.70	50.79	3.37	6.32	46.76	98.00	63.31	26.11
	Pattern.en	55.47	50.33	69.25	58.29	60.04	33.09	42.66	59.25	56.89	58.05	53.00
	SANN	50.68	47.80	30.82	37.48	54.52	22.87	32.22	51.01	77.83	61.63	43.77
	SASA	46.04	39.93	41.27	40.59	39.09	34.56	36.69	53.12	54.89	53.99	43.76
	Semantria	57.69	58.84	52.91	55.72	54.29	44.05	48.63	58.23	67.59	62.56	55.64
	SenticNet	50.24	49.76	53.51	51.56	38.36	58.69	46.40	63.53	43.88	51.91	49.96
	Sentiment140	59.95	63.25	51.64	56.86	68.09						

Table 8: 3-classes experiments results with 4 datasets

Dataset	Method	Accur.	Posit. Sentiment			Negat. Sentiment			Neut. Sentiment			MacroF1
			P	R	F1	P	R	F1	P	R	F1	
Tweets _RND_III	AFINN	64.41	40.81	72.12	52.13	49.67	62.50	55.35	85.95	62.54	72.40	59.96
	ANEW_SUB	28.03	21.89	92.29	35.38	44.30	34.22	38.61	74.82	8.18	14.74	29.58
	Emolex	54.76	31.67	59.95	41.44	40.14	47.54	43.53	77.48	54.64	64.08	49.68
	Emoticons	70.22	70.06	16.78	27.07	65.62	8.61	15.22	41.29	97.56	58.02	33.44
	Emoticons DS	20.34	19.78	99.46	33.00	62.07	3.69	6.96	53.85	0.55	1.09	13.68
	NRC Hashtag	30.47	28.25	77.40	41.39	24.18	72.54	36.27	79.08	8.77	15.78	31.15
	LIWC07	46.88	21.85	38.43	27.86	19.18	18.24	18.70	69.51	54.83	61.31	35.95
	LIWC15	67.75	44.78	78.35	56.99	57.49	57.38	57.44	85.18	66.67	74.80	63.07
	Opinion Finder	71.55	57.48	32.75	41.72	49.85	34.63	40.87	75.95	89.90	82.34	54.98
	Opinion Lexicon	63.86	40.65	66.17	50.36	48.84	56.15	52.24	81.96	64.66	72.29	58.30
	PANAS-t	68.79	79.49	8.39	15.18	48.57	3.48	6.50	68.75	98.86	81.10	34.26
	Pattern.en	59.56	36.20	77.00	49.24	52.87	45.29	48.79	81.75	57.23	67.33	55.12
	SANN	66.06	40.60	36.81	38.61	44.87	28.69	35.00	74.54	81.72	77.97	50.53
	SASA	55.37	29.42	54.53	38.22	42.46	47.34	44.77	78.30	57.15	66.08	49.69
	Semantria	68.89	48.86	63.73	55.31	49.82	55.53	52.52	82.02	72.96	77.22	61.68
	SenticNet	29.97	31.08	74.83	43.92	20.98	73.98	32.68	79.70	8.49	15.35	30.65
	Sentiment140	76.40	64.42	51.69	57.36	74.75	45.49	56.56	79.04	89.50	83.94	65.95
	Sentiment140.L	31.32	25.83	77.13	38.70	30.05	78.69	43.49	79.37	8.92	16.04	32.74
	SentiStrength	73.80	70.94	41.95	52.72	57.53	25.82	35.64	75.35	92.26	82.95	57.10
	SentiWordNet	55.85	37.42	58.19	45.55	24.04	35.86	28.78	79.25	59.00	67.64	47.33
	SO-CAL	66.51	43.06	68.88	52.99	51.84	60.66	55.90	45.77	66.94	54.37	54.42
Stanford DM	31.90	64.48	38.57	48.26	15.58	85.04	26.33	75.64	19.77	31.35	35.32	
Umigon	74.12	57.67	70.23	63.33	48.83	68.44	57.00	88.80	76.34	82.10	67.47	
VADER	60.14	37.69	81.60	51.56	48.56	65.57	55.80	88.96	52.87	66.32	57.89	
Tweets _RND_IV	AFINN	50.60	46.05	62.26	52.94	50.96	44.54	47.53	55.80	45.50	50.12	50.20
	ANEW_SUB	39.60	36.06	88.68	51.27	45.07	26.89	33.68	65.79	11.26	19.23	34.73
	Emolex	45.40	42.27	51.57	46.46	44.05	31.09	36.45	48.65	48.65	48.65	43.85
	Emoticons	77.20	76.06	67.92	71.76	82.50	83.19	82.85	42.93	80.63	56.03	70.21
	Emoticons DS	32.60	32.04	98.74	48.38	66.67	1.68	3.28	57.14	1.80	3.49	18.38
	NRC Hashtag	36.00	39.27	61.01	47.78	29.68	54.62	38.46	52.94	8.11	14.06	33.44
	LIWC07	41.00	37.17	44.65	40.57	39.76	27.73	32.67	44.69	45.50	45.09	39.44
	LIWC15	64.60	62.15	83.65	71.31	62.96	71.43	66.93	69.54	47.30	56.30	64.85
	Opinion Finder	49.00	54.26	32.08	40.32	38.10	26.89	31.53	50.31	72.97	59.56	43.80
	Opinion Lexicon	51.40	50.53	59.75	54.76	47.66	42.86	45.13	54.15	50.00	51.99	50.63
	PANAS-t	46.00	53.85	4.40	8.14	40.00	5.04	8.96	45.97	97.75	62.54	26.54
	Pattern.en	67.20	58.02	88.68	70.15	72.66	78.15	75.30	79.07	45.95	58.12	67.86
	SANN	44.80	40.00	28.93	33.58	47.92	19.33	27.54	45.99	69.82	55.46	38.86
	SASA	44.40	39.11	44.03	41.42	39.05	34.45	36.61	51.39	50.00	50.68	42.90
	Semantria	64.20	62.15	69.18	65.48	63.38	75.63	68.97	66.85	54.50	60.05	64.83
	SenticNet	60.60	59.22	66.67	62.72	51.98	77.31	62.16	72.92	47.30	57.38	60.75
	Sentiment140	59.60	61.15	53.46	57.05	64.84	49.58	56.19	57.04	69.37	62.60	58.61
	Sentiment140.L	49.00	44.65	76.10	56.28	52.63	84.03	64.72	61.54	10.81	18.39	46.46
	SentiStrength	54.20	72.50	36.48	48.54	55.26	17.65	26.75	50.26	86.49	63.58	46.29
	SentiWordNet	45.80	43.11	45.28	44.17	37.21	26.89	31.22	50.61	56.31	53.30	42.90
	SO-CAL	54.80	49.43	54.09	51.65	53.85	47.06	50.22	37.29	59.46	45.83	49.24
Stanford DM	35.20	67.86	35.85	46.91	26.56	82.35	40.16	44.68	9.46	15.61	34.23	
Umigon	74.40	69.84	83.02	75.86	65.85	90.76	76.33	89.80	59.46	71.54	74.58	
VADER	59.40	51.69	86.79	64.79	61.11	64.71	62.86	76.64	36.94	49.85	59.16	
Tweets _SAN	AFINN	58.70	29.77	61.66	40.15	45.29	47.90	46.56	81.19	60.69	69.46	52.06
	ANEW_SUB	26.46	16.72	85.55	27.97	42.00	25.70	31.89	75.36	13.50	22.90	27.59
	Emolex	50.58	21.21	50.67	29.90	42.83	36.54	39.43	74.29	54.01	62.55	43.96
	Emoticons	67.11	30.17	6.74	11.02	52.78	3.32	6.25	40.69	96.19	57.19	24.82
	Emoticons DS	16.44	15.03	96.34	26.01	26.32	0.87	1.69	73.42	2.49	4.81	10.84
	NRC Hashtag	25.53	18.66	54.53	27.80	25.64	75.17	38.24	70.00	6.90	12.56	26.20
	LIWC07	58.27	28.45	62.43	39.08	49.42	37.24	42.47	78.64	62.49	69.64	50.40
	LIWC15	59.35	29.86	66.28	41.17	51.20	40.91	45.48	80.11	62.32	70.11	52.25
	Opinion Finder	65.30	31.04	23.51	26.75	40.23	24.13	30.16	73.51	84.70	78.71	45.21
	Opinion Lexicon	59.96	31.85	58.00	41.12	44.69	49.30	46.88	79.55	63.01	70.32	52.77
	PANAS-t	68.11	44.44	1.54	2.98	45.16	2.45	4.64	68.44	99.01	80.94	29.52
	Pattern.en	55.90	26.48	65.70	37.74	53.39	35.84	42.89	78.08	58.64	66.98	49.20
	SANN	60.48	25.87	31.41	28.37	34.98	17.31	23.16	72.04	77.54	74.69	42.07
	SASA	51.11	20.67	36.99	26.52	23.44	17.13	19.80	70.29	62.58	66.21	37.51
	Semantria	60.05	29.87	49.33	37.21	44.07	41.61	42.81	77.06	66.95	71.65	50.56
	SenticNet	42.99	23.83	43.16	30.71	25.45	59.09	35.58	78.72	39.01	52.16	39.48
	Sentiment140	65.62	32.86	40.08	36.11	58.67	35.49	44.23	75.09	78.70	76.85	52.40
	Sentiment140.L	26.58	17.68	64.35	27.74	31.37	71.85	43.68	73.33	7.07	12.90	28.11
	SentiStrength	69.63	46.87	30.25	36.77	58.41	23.08	33.08	73.17	89.80	80.64	50.16
	SentiWordNet	54.38	24.61	46.05	32.08	33.85	34.44	34.14	76.22	61.12	67.84	44.69
	SO-CAL	58.67	28.02	55.88	37.32	48.40	52.97	50.58	44.54	60.69	51.38	46.43
Stanford DM	25.09	43.09	20.42	27.71	18.42	92.66	30.72	74.33	9.56	16.94	25.13	
Umigon	60.43	35.96	57.23	44.16	39.69	54.55	45.95	80.57	62.58	70.45	53.52	
VADER	55.32	28.15	71.48	40.39	45.51	50.52	47.89	83.89	52.89	64.88	51.05	
Tweets _Semeval	AFINN	62.36	61.10	70.09	65.28	44.08	55.56	49.15	71.43	58.57	64.37	59.60
	ANEW_SUB	39.51	38.79	96.31	55.31	43.50	23.18	30.24	57.38	2.31	4.45	30.00
	Emolex	48.74	48.15	62.71	54.47	31.27	38.59	34.55	57.90	41.30	48.21	45.74
	Emoticons	52.88	72.83	11.34	19.62	55.56	5.38	9.80	34.05	96.53	50.34	26.59
	Emoticons DS	36.59	36.55	100.00	53.53	75.00	0.36	0.71	100.00	0.03	0.07	18.10
	NRC Hashtag	36.95	42.04	75.03	53.88	24.57	56.03	34.16	53.33	3.70	6.92	31.65
	LIWC07	39.54	36.52	42.33	39.21	15.14	13.02	14.00	48.64	44.83	46.66	33.29
	LIWC15	62.56	59.77	71.03	64.91	49.04	42.65	45.62	68.90	61.84	65.18	58.57
	Opinion Finder	57.63	67.57	27.94	39.53	40.75	33.69	36.89	58.20	86.06	69.44	48.62
	Opinion Lexicon	60.37	62.09	62.71	62.40	41.19	52.81	46.28	66.41	60.75	63.46	57.38
	PANAS-t	53.08	90.95	9.04	16.45	51.56	3.94	7.33	51.65	99.01	67.89	30.55
	Pattern.en	57.99	57.97	68.74	62.89	34.83	35.24	35.04	65.55	56.39	60.63	52.85
	SANN	52.13	49.86	32.88	39.63	39.96	22.82	29.05	54.33	74.36	62.79	43.82
	SASA	50.63	46.34	47.77	47.04	33.07	20.31	25.17	56.39	61.12	58.66	43.62
	Semantria	61.54	67.28	57.35	61.92	39.57	52.81	45.24	65.98	67.03	66.50	57.89
	SenticNet	49.68	51.85	1.26	2.46	29.79	1.67	3.17	49.82	98.51	66.17	23.93
	Sentiment140	60.42	63.87	51.37	56.94	50.96						

Table 9: 3-classes experiments results with 1 dataset

Dataset	Method	Accur.	Posit. Sentiment			Negat. Sentiment			Neut. Sentiment			MacroF1
			P	R	F1	P	R	F1	P	R	F1	
RW	AFINN	55.07	59.82	80.58	68.66	50.83	41.63	45.77	44.13	27.57	33.94	49.46
	ANEW_SUB	48.47	48.63	95.25	64.39	48.15	11.76	18.91	45.45	5.87	10.39	31.23
	Emolex	48.95	56.31	68.18	61.68	39.29	34.84	36.93	39.77	30.79	34.71	44.44
	Emoticons	37.28	65.12	17.36	27.41	46.15	5.43	9.72	24.81	86.22	38.53	25.22
	Emoticons DS	46.75	46.62	99.59	63.50	66.67	1.81	3.52	50.00	0.88	1.73	22.92
	NRC Hashtag	44.07	57.59	61.16	59.32	30.10	67.42	41.62	43.24	4.69	8.47	36.47
	LIWC07	54.02	59.03	80.37	68.07	55.46	29.86	38.82	41.04	32.26	36.12	47.67
	LIWC15	54.97	59.50	82.85	69.26	56.78	30.32	39.53	42.13	31.38	35.97	48.25
	Opinion Finder	39.39	56.67	38.64	45.95	27.86	42.99	33.81	34.67	38.12	36.31	38.69
	Opinion Lexicon	52.10	59.86	72.11	65.42	45.16	44.34	44.75	39.84	28.74	33.39	47.85
	PANAS-t	34.99	60.61	8.26	14.55	30.19	7.24	11.68	33.44	90.91	48.90	25.04
	Pattern.en	50.48	59.74	67.15	63.23	51.69	20.81	29.68	38.01	46.04	41.64	44.85
	SANN	41.01	58.33	33.26	42.37	42.27	18.55	25.79	33.73	66.57	44.77	37.64
	SASA	41.01	55.28	41.12	47.16	30.09	29.41	29.75	35.11	48.39	40.69	39.20
	Semantria	52.10	66.75	56.82	61.38	48.99	43.89	46.30	39.68	50.73	44.53	50.74
	SenticNet	44.17	62.30	54.96	58.40	31.04	71.49	43.29	34.55	11.14	16.85	39.51
	Sentiment140	52.77	71.39	55.17	62.24	45.02	59.28	51.17	40.42	45.16	42.66	52.02
	Sentiment140.L	48.09	63.30	63.43	63.36	33.07	76.02	46.09	52.83	8.21	14.21	41.22
	SentiStrength	41.11	77.04	21.49	33.60	45.57	16.29	24.00	34.86	85.04	49.45	35.68
	SentiWordNet	46.27	57.01	63.02	59.86	31.03	40.72	35.23	40.27	26.10	31.67	42.25
	SO-CAL	49.24	63.07	62.81	62.94	36.89	54.75	44.08	27.61	26.39	26.99	44.67
	Stanford DM	31.74	78.57	15.91	26.46	24.10	90.95	38.10	47.37	15.84	23.74	29.43
	Umigon	41.78	70.59	39.67	50.79	27.73	67.87	39.37	40.77	27.86	33.10	41.09
VADER	55.16	57.92	87.60	69.74	51.41	41.18	45.73	45.26	18.18	25.94	47.14	

Table 10: 2-classes experiments - Plain Lexicons (Without Vader’s Heuristics)

Dataset	Method	Accur.	Posit. Sentiment			Negat. Sentiment			MacroF1	Coverage
			P	R	F1	P	R	F1		
Comments _BBC	AFINN	63.94	21.40	77.78	33.56	95.47	62.11	75.26	54.41	71.54
	ANEW_SUB	28.99	14.91	95.83	25.81	96.88	19.11	31.92	28.86	99.07
	Emolex	79.07	29.25	61.43	39.63	94.36	81.29	87.34	63.49	83.24
	Emoticons DS	12.92	12.80	100.00	22.70	100.00	0.15	0.31	11.50	98.80
	NRC Hashtag	86.22	29.27	15.79	20.51	89.91	95.16	92.46	56.49	89.76
	Opinion Lexicon	75.00	27.91	90.57	42.67	98.55	73.22	84.01	63.34	68.62
	PANAS-t	58.82	17.02	72.73	27.59	94.55	57.14	71.23	49.41	13.56
	Sentiment140	57.43	17.82	65.96	28.05	91.98	56.20	69.77	48.91	99.34
	SentiWordNet	49.11	17.17	82.22	28.41	94.70	44.48	60.53	44.47	97.47
Comments _Digg	AFINN	68.00	44.03	86.99	58.47	93.10	61.36	73.97	66.22	60.74
	ANEW_SUB	39.63	29.76	93.94	45.20	90.16	20.04	32.79	38.99	95.52
	Emolex	71.48	34.29	45.28	39.02	84.97	78.10	81.39	60.21	67.26
	Emoticons DS	26.39	26.12	99.48	41.38	75.00	0.55	1.09	21.24	94.50
	NRC Hashtag	79.20	42.31	19.64	26.83	82.86	93.55	87.88	57.35	73.79
	Opinion Lexicon	68.62	42.06	85.71	56.43	93.45	63.31	75.49	65.96	56.65
	PANAS-t	68.09	26.32	83.33	40.00	96.43	65.85	78.26	59.13	6.01
	Sentiment140	65.33	39.56	66.15	49.51	84.74	65.05	73.60	61.56	95.52
	SentiWordNet	56.40	33.59	71.04	45.61	83.64	51.33	63.62	54.61	90.92
Comments _NYT	AFINN	72.34	64.26	81.24	71.76	82.08	65.55	72.89	72.32	44.58
	ANEW_SUB	55.25	49.96	92.18	64.80	80.09	25.41	38.58	51.69	97.82
	Emolex	59.57	55.11	47.09	50.79	62.28	69.50	65.69	58.24	65.81
	Emoticons DS	45.14	44.95	100.00	62.02	100.00	0.64	1.26	31.64	97.86
	NRC Hashtag	60.94	57.79	25.39	35.28	61.65	86.61	72.03	53.66	74.65
	Opinion Lexicon	74.06	66.61	78.86	72.22	81.69	70.47	75.67	73.94	48.32
	PANAS-t	60.93	58.93	63.46	61.11	63.11	58.56	60.75	60.93	4.35
	Sentiment140	61.87	56.43	63.45	59.74	67.34	60.60	63.79	61.76	98.79
	SentiWordNet	58.00	52.42	69.63	59.81	66.24	48.53	56.01	57.91	93.29
Comments _TED	AFINN	69.78	63.95	90.67	75.00	83.97	48.89	61.80	68.40	61.90
	ANEW_SUB	52.29	47.46	92.65	62.77	79.09	21.32	33.59	48.18	99.17
	Emolex	67.79	59.53	63.05	61.24	73.96	71.00	72.45	66.85	69.19
	Emoticons DS	43.26	43.26	100.00	60.40	0.00	0.00	0.00	30.20	96.97
	NRC Hashtag	66.67	55.84	45.50	50.15	71.31	79.01	74.96	62.55	70.56
	Opinion Lexicon	67.79	59.21	84.10	69.49	81.76	55.16	65.88	67.68	61.49
	PANAS-t	81.82	85.19	85.19	85.19	76.47	76.47	76.47	80.83	6.05
	Sentiment140	61.71	52.93	74.32	61.82	74.14	52.70	61.60	61.71	96.29
	SentiWordNet	55.44	49.45	74.50	59.45	67.09	40.57	50.56	55.00	94.77
Comments _YTB	AFINN	84.44	85.41	94.23	89.61	80.86	60.23	69.04	79.32	62.09
	ANEW_SUB	74.81	74.07	96.90	83.96	80.82	27.81	41.38	62.67	91.57
	Emolex	69.65	82.27	65.71	73.07	57.01	76.25	65.24	69.15	52.84
	Emoticons DS	69.08	68.97	99.68	81.53	79.17	2.66	5.15	43.34	93.09
	NRC Hashtag	60.61	88.66	39.24	54.40	50.50	92.51	65.33	59.87	61.60
	Opinion Lexicon	82.79	85.63	89.73	87.64	75.76	68.07	71.71	79.67	51.85
	PANAS-t	78.57	80.41	87.64	83.87	74.42	62.75	68.09	75.98	5.76
	Sentiment140	69.32	79.85	72.64	76.08	52.79	62.53	57.25	66.66	90.87
	SentiWordNet	70.74	77.24	80.72	78.94	54.83	49.60	52.09	65.52	80.67
Reviews _I	AFINN	65.43	62.85	82.54	71.36	71.05	46.75	56.40	63.88	64.35
	ANEW_SUB	55.49	53.16	93.05	67.67	71.93	17.85	28.60	48.13	98.68
	Emolex	58.81	61.67	47.15	53.44	57.03	70.53	63.07	58.25	80.22
	Emoticons DS	50.08	50.06	100.00	66.72	100.00	0.11	0.23	33.47	99.91
	NRC Hashtag	60.21	66.79	34.04	45.09	58.08	84.37	68.80	56.95	63.71
	Opinion Lexicon	69.34	68.78	74.75	71.64	70.07	63.53	66.64	69.14	73.20
	PANAS-t	63.10	68.95	67.24	68.08	55.32	57.26	56.27	62.18	8.41
	Sentiment140	61.11	57.51	85.33	68.71	71.50	36.87	48.65	58.68	99.90
	SentiWordNet	57.78	56.76	67.93	61.84	59.33	47.48	52.75	57.30	95.39
Reviews _II	AFINN	64.36	61.96	81.24	70.30	69.47	46.11	55.43	62.87	59.25
	ANEW_SUB	55.15	52.73	93.59	67.46	73.15	17.21	27.87	47.66	99.05
	Emolex	59.08	61.47	48.46	54.20	57.53	69.68	63.02	58.61	73.40
	Emoticons DS	50.04	49.92	99.98	66.59	96.30	0.49	0.98	33.79	99.05
	NRC Hashtag	59.57	65.77	34.03	44.85	57.51	83.44	68.09	56.47	65.79
	Opinion Lexicon	67.60	67.39	74.07	70.57	67.89	60.47	63.97	67.27	67.55
	PANAS-t	65.03	70.65	68.89	69.76	57.55	59.57	58.54	64.15	8.47
	Sentiment140	62.11	59.05	77.21	66.92	67.76	47.21	55.65	61.29	99.11
	SentiWordNet	57.92	56.53	68.20	61.82	60.02	47.66	53.13	57.48	95.77
Myspace	AFINN	87.80	94.63	90.97	92.76	55.32	68.42	61.18	76.97	64.87
	ANEW_SUB	86.36	87.83	97.24	92.30	66.67	29.03	40.45	66.37	93.17
	Emolex	65.48	93.07	62.50	74.78	31.75	78.95	45.28	60.03	50.36
	Emoticons DS	84.30	84.56	99.56	91.45	50.00	2.36	4.51	47.98	97.00
	NRC Hashtag	48.14	95.98	36.87	53.27	26.85	93.75	41.75	47.51	67.75
	Opinion Lexicon	80.85	92.17	83.82	87.80	47.37	67.16	55.56	71.68	45.08
	PANAS-t	92.71	98.80	93.18	95.91	53.85	87.50	66.67	81.29	11.51
	Sentiment140	76.70	91.23	79.81	85.14	37.07	60.80	46.06	65.60	91.61
	SentiWordNet	73.94	88.35	79.67	83.79	27.81	42.73	33.69	58.74	85.13
Amazon _	AFINN	74.37	76.25	88.09	81.75	68.64	48.71	56.98	69.36	49.28
	ANEW_SUB	61.67	61.07	96.42	74.77	69.67	11.81	20.19	47.48	97.12
	Emolex	54.79	68.24	45.05	54.27	46.07	69.14	55.30	54.78	61.02
	Emoticons DS	59.72	59.63	99.71	74.63	73.91	1.20	2.36	38.49	96.76
	NRC Hashtag	58.12	77.91	34.34	47.67	51.70	87.83	65.09	56.38	69.11
	Opinion Lexicon	75.71	78.79	86.27	82.36	67.81	55.47	61.03	71.69	54.63
	PANAS-t	84.16	88.64	92.86	90.70	53.85	41.18	46.67	68.68	2.80
	Sentiment140	60.87	73.52	52.59	61.32	51.65	72.78	60.42	60.87	98.98
	SentiWordNet	61.22	64.85	74.60	69.39	53.56	42.02	47.09	58.24	91.63
Tweets _DBT	AFINN	66.42	54.55	83.61	66.02	84.08	55.42	66.81	66.41	47.40
	ANEW_SUB	47.85	38.62	81.73	52.46	74.79	29.44	42.25	47.35	92.72
	Emolex	64.03	46.47	55.89	50.75	75.68	68.07	71.67	61.21	55.63
	Emoticons DS	37.29	37.05	99.86	54.05	88.89	0.66	1.31	27.68	97.42
	NRC Hashtag	70.58	46.38	25.74	33.10	75.09	88.27	81.15	57.13	66.65
	Opinion Lexicon	70.16	57.17	80.42	66.83	84.56	64.03	72.88	69.85	44.87
	PANAS-t	78.75	53.33	84.21	65.31	94.00	77.05	84.68	75.00	4.04
	Sentiment140	64.11	50.21	68.15	57.82	77.46	61.83	68.77	63.30	97.57
	SentiWordNet	52.65	40.19	71.65	51.49	73.45	42.39	53.75	52.62	84.84

Table 11: 2-classes experiments - Plain Lexicons (Without Vader’s Heuristics)

Dataset	Method	Accur.	Posit. Sentiment			Negat. Sentiment			MacroF1	Coverage
			P	R	F1	P	R	F1		
Tweets _RND_I	AFINN	81.05	81.02	91.37	85.88	81.11	63.39	71.16	78.52	60.16
	ANEW.SUB	64.96	62.98	96.13	76.10	80.31	21.84	34.34	55.22	97.25
	Emolex	66.25	75.91	58.77	66.25	58.77	75.91	66.25	66.25	55.26
	Emoticons DS	59.61	59.38	100.00	74.51	100.00	1.41	2.78	38.64	98.43
	NRC Hashtag	62.68	84.01	38.60	52.89	55.59	91.28	69.10	61.00	73.39
	Opinion Lexicon	80.16	80.74	86.76	83.64	79.19	70.88	74.80	79.22	49.10
	PANAS-t	83.52	91.09	81.42	85.98	74.07	86.96	80.00	82.99	7.95
	Sentiment140	71.66	77.90	71.89	74.77	64.38	71.35	67.68	71.23	97.90
SentiWordNet	65.37	67.49	77.45	72.12	61.20	48.81	54.30	63.21	91.09	
Tweets _RND_II	AFINN	93.47	95.02	95.48	95.25	90.05	89.10	89.57	92.41	64.59
	ANEW.SUB	79.66	78.55	96.79	86.72	85.74	42.22	56.58	71.65	95.14
	Emolex	67.98	86.91	59.58	70.69	52.84	83.46	64.71	67.70	52.03
	Emoticons DS	72.11	71.48	99.93	83.35	97.89	7.70	14.27	48.81	95.45
	NRC Hashtag	56.47	89.05	37.17	52.45	44.45	91.67	59.87	56.16	67.02
	Opinion Lexicon	89.09	93.63	89.84	91.69	80.89	87.56	84.09	87.89	48.26
	PANAS-t	88.05	96.09	85.66	90.57	76.13	92.91	83.69	87.13	9.18
	Sentiment140	71.96	85.46	71.48	77.85	53.59	73.03	61.82	69.83	95.54
SentiWordNet	53.48	79.67	44.13	56.80	37.17	74.59	49.62	53.21	94.38	
Tweets _RND_III	AFINN	86.74	86.20	93.76	89.82	87.88	75.08	80.98	85.40	66.99
	ANEW.SUB	70.96	67.98	97.60	80.14	89.57	30.93	45.98	63.06	96.25
	Emolex	72.71	84.64	65.06	73.57	63.01	83.45	71.80	72.69	57.95
	Emoticons DS	62.50	61.95	99.86	76.46	95.00	4.09	7.84	42.15	97.15
	NRC Hashtag	70.93	91.32	49.11	63.87	62.94	94.88	75.68	69.78	70.09
	Opinion Lexicon	87.27	86.76	92.91	89.73	88.19	78.87	83.27	86.50	53.79
	PANAS-t	90.07	94.12	92.31	93.20	79.49	83.78	81.58	87.39	11.49
	Sentiment140	76.42	84.60	74.55	79.26	67.09	79.27	72.67	75.97	96.41
SentiWordNet	70.86	73.98	80.18	76.96	64.86	56.47	60.38	68.67	88.10	
Tweets _RND_IV	AFINN	81.44	77.78	94.79	85.45	90.00	63.38	74.38	79.91	60.07
	ANEW.SUB	61.65	60.78	92.76	73.44	67.65	20.18	31.08	52.26	95.68
	Emolex	65.79	78.57	59.78	67.90	54.88	75.00	63.38	65.64	54.68
	Emoticons DS	59.41	58.65	100.00	73.93	100.00	4.35	8.33	41.13	97.48
	NRC Hashtag	59.00	72.73	31.37	43.84	55.13	87.76	67.72	55.78	71.94
	Opinion Lexicon	73.83	74.47	82.35	78.21	72.73	62.50	67.23	72.72	53.60
	PANAS-t	67.50	73.68	63.64	68.29	61.90	72.22	66.67	67.48	14.39
	Sentiment140	79.49	91.74	70.70	79.86	69.74	91.38	79.10	79.48	98.20
SentiWordNet	59.76	62.65	72.73	67.31	54.12	42.59	47.67	57.49	90.29	
Tweets _STF	AFINN	80.67	76.35	91.13	83.09	87.78	69.30	77.45	80.27	66.30
	ANEW.SUB	64.66	59.64	93.18	72.73	83.56	35.47	49.80	61.26	96.94
	Emolex	67.98	70.79	61.76	65.97	65.79	74.26	69.77	67.87	56.55
	Emoticons DS	53.43	52.75	100.00	69.07	100.00	2.98	5.78	37.43	97.49
	NRC Hashtag	77.25	81.13	50.00	61.87	76.11	93.20	83.79	72.83	64.90
	Opinion Lexicon	83.33	77.12	93.81	84.65	92.50	73.27	81.77	83.21	55.15
	PANAS-t	82.76	80.00	85.71	82.76	85.71	80.00	82.76	82.76	8.08
	Sentiment140	76.14	77.38	73.86	75.58	75.00	78.41	76.67	76.12	98.05
SentiWordNet	62.93	61.65	76.05	68.10	65.22	48.70	55.76	61.93	89.42	
Tweets _SAN	AFINN	74.23	68.19	86.45	76.24	83.53	63.02	71.84	74.04	59.40
	ANEW.SUB	56.66	52.18	95.39	67.46	84.40	22.20	35.16	51.31	92.85
	Emolex	70.19	62.44	63.03	62.74	75.39	74.92	75.16	68.95	48.58
	Emoticons DS	47.85	47.59	99.40	64.36	72.73	1.45	2.85	33.60	95.97
	NRC Hashtag	66.47	60.68	27.63	37.97	67.65	89.43	77.03	57.50	63.43
	Opinion Lexicon	76.33	71.33	83.26	76.83	82.46	70.15	75.81	76.32	46.47
	PANAS-t	74.51	80.56	82.86	81.69	60.00	56.25	58.06	69.88	4.67
	Sentiment140	69.71	68.70	65.79	67.21	70.54	73.20	71.84	69.53	96.52
SentiWordNet	61.05	56.56	76.33	64.97	68.99	47.32	56.13	60.55	87.53	
Tweets _Semeval	AFINN	85.88	89.68	91.68	90.67	73.55	68.67	71.03	80.85	64.58
	ANEW.SUB	75.93	76.05	97.60	85.49	74.27	18.37	29.45	57.47	99.51
	Emolex	65.32	85.02	60.49	70.69	46.26	76.14	57.55	64.12	55.88
	Emoticons DS	72.67	72.66	100.00	84.17	100.00	0.12	0.24	42.20	99.97
	NRC Hashtag	53.27	90.21	34.79	50.21	40.21	92.07	55.98	53.09	66.44
	Opinion Lexicon	83.43	89.68	87.13	88.39	68.64	73.74	71.10	79.74	54.05
	PANAS-t	89.11	95.10	91.58	93.31	65.28	77.05	70.68	81.99	11.70
	Sentiment140	71.57	87.15	71.39	78.49	48.67	72.04	58.09	68.29	100.00
SentiWordNet	66.86	78.91	74.05	76.40	41.25	47.94	44.34	60.37	98.01	
RW	AFINN	81.85	83.33	93.75	88.24	75.27	50.36	60.34	74.29	71.91
	ANEW.SUB	70.87	70.48	98.94	82.32	80.77	9.68	17.28	49.80	97.87
	Emolex	51.45	82.42	37.88	51.91	37.01	81.88	50.97	51.44	73.62
	Emoticons DS	69.10	69.01	100.00	81.66	100.00	0.92	1.82	41.74	99.15
	NRC Hashtag	43.21	91.55	16.88	28.51	36.38	96.83	52.89	40.70	81.42
	Opinion Lexicon	80.25	84.18	88.96	86.50	68.38	58.82	63.24	74.87	66.81
	PANAS-t	59.13	71.43	64.94	68.03	40.00	47.37	43.37	55.70	16.31
	Sentiment140	69.26	86.55	65.19	74.37	50.89	78.08	61.62	67.99	98.30
SentiWordNet	70.25	76.86	81.05	78.90	52.97	46.67	49.62	64.26	94.89	

Table 12: 3-classes experiments - Plain Lexicons (Without Vader’s Heuristics)

Dataset	Method	Accur.	Posit. Sentiment			Negat. Sentiment			Neut. Sentiment			MacroF1
			P	R	F1	P	R	F1	P	R	F1	
Comments _BBC	AFINN	45.40	15.08	49.49	23.11	84.05	45.18	58.76	25.35	44.35	32.26	38.05
	ANEW_SUB	22.50	10.98	92.93	19.64	84.93	18.99	31.04	56.25	3.63	6.82	19.16
	Emolex	56.80	20.00	43.43	27.39	77.13	69.22	72.96	26.84	29.44	28.08	42.81
	Emoticons DS	10.00	9.64	95.96	17.53	50.00	0.15	0.31	23.53	1.61	3.02	6.95
	NRC Hashtag	63.80	19.35	12.12	14.91	70.81	87.29	78.19	29.63	22.58	25.63	39.58
	Opinion Lexicon	51.20	19.35	48.48	27.67	86.70	51.91	64.94	25.72	50.40	34.06	42.22
	PANAS-t	27.90	13.56	8.08	10.13	72.22	7.96	14.34	20.13	88.31	32.78	19.09
	Sentiment140	43.30	12.58	62.63	20.95	73.69	56.20	63.77	30.77	1.61	3.07	29.26
	SentiWordNet	38.10	12.56	74.75	21.51	77.09	43.80	55.86	52.50	8.47	14.58	30.65
Comments _Digg	AFINN	46.61	32.82	50.95	39.93	81.51	37.76	51.61	26.92	60.68	37.29	42.94
	ANEW_SUB	31.48	21.99	88.57	35.23	71.90	19.23	30.34	55.13	14.58	23.06	29.54
	Emolex	48.19	26.23	22.86	24.43	66.26	57.34	61.48	26.38	48.47	34.17	40.03
	Emoticons DS	20.71	19.18	91.43	31.71	60.00	0.52	1.04	28.28	9.49	14.21	15.65
	NRC Hashtag	52.00	28.21	10.48	15.28	62.95	76.05	68.88	25.06	34.92	29.18	37.78
	Opinion Lexicon	43.92	30.82	42.86	35.86	77.26	37.41	50.41	24.96	57.29	34.77	40.35
	PANAS-t	29.34	20.00	2.38	4.26	81.82	4.72	8.93	21.80	96.27	35.54	16.24
	Sentiment140	47.82	28.16	60.48	38.43	64.01	63.11	63.56	30.34	9.15	14.06	38.68
	SentiWordNet	43.18	24.62	61.90	35.23	65.46	47.38	54.97	47.41	21.69	29.77	39.99
Comments _NYT	AFINN	34.57	62.75	35.16	45.07	80.79	29.91	43.65	6.34	81.56	11.76	33.50
	ANEW_SUB	51.75	47.58	90.43	62.35	77.27	24.80	37.55	10.74	5.33	7.12	35.67
	Emolex	39.81	53.09	30.81	38.99	60.20	45.95	52.12	6.53	52.05	11.60	34.24
	Emoticons DS	42.41	42.92	98.37	59.77	100.00	0.62	1.23	11.59	6.56	8.38	23.12
	NRC Hashtag	45.32	55.67	17.83	27.01	59.37	67.72	63.27	7.00	41.80	11.99	34.09
	Opinion Lexicon	37.96	65.37	36.57	46.90	80.27	35.16	48.90	7.26	81.97	13.33	36.38
	PANAS-t	7.19	58.93	2.99	5.70	61.90	2.37	4.57	4.64	99.18	8.87	6.38
	Sentiment140	58.54	53.50	62.70	57.74	64.81	59.85	62.23	16.67	6.15	8.98	42.98
	SentiWordNet	52.31	50.10	65.43	56.75	63.58	45.00	52.70	10.51	15.98	12.68	40.71
Comments _TED	AFINN	44.70	57.95	64.15	60.90	73.83	26.89	39.43	15.29	54.46	23.87	41.40
	ANEW_SUB	45.05	40.62	91.19	56.20	73.73	21.27	33.02	14.29	0.89	1.68	30.30
	Emolex	44.70	52.67	40.25	45.63	63.02	52.08	57.03	11.64	30.36	16.83	39.83
	Emoticons DS	36.71	37.47	95.91	53.89	0.00	0.00	0.00	10.71	2.68	4.29	19.39
	NRC Hashtag	45.29	51.81	27.04	35.54	60.81	62.59	61.69	13.10	33.93	18.91	38.71
	Opinion Lexicon	43.38	53.77	51.57	52.65	72.02	33.99	46.18	15.17	54.46	23.74	40.85
	PANAS-t	17.04	74.19	7.23	13.18	72.22	3.18	6.09	11.93	95.54	21.21	13.49
	Sentiment140	51.85	45.21	68.24	54.39	65.35	52.57	58.27	9.09	2.68	4.14	38.93
	SentiWordNet	46.13	43.44	70.75	53.83	56.47	38.39	45.71	11.63	4.46	6.45	35.33
Comments _YTB	AFINN	54.04	68.54	60.84	64.46	59.41	34.16	43.38	27.56	58.05	37.37	48.40
	ANEW_SUB	53.45	54.90	88.17	67.67	53.08	25.81	34.74	43.06	15.90	23.22	41.87
	Emolex	40.74	66.21	31.77	42.94	37.81	47.72	42.19	23.11	50.56	31.72	38.95
	Emoticons DS	47.84	49.13	92.79	64.24	67.86	2.48	4.78	22.00	6.77	10.35	26.46
	NRC Hashtag	36.66	70.40	21.14	32.52	34.07	72.49	46.35	21.10	34.97	26.32	35.06
	Opinion Lexicon	48.40	68.66	46.19	55.22	53.82	35.85	43.04	25.41	62.05	36.05	44.77
	PANAS-t	30.79	70.27	4.68	8.78	49.23	4.17	7.69	22.52	96.31	36.50	17.66
	Sentiment140	47.11	59.23	64.74	61.87	35.14	59.19	44.10	19.84	7.49	10.87	38.95
	SentiWordNet	48.37	58.45	64.62	61.38	37.32	40.68	38.93	35.62	26.67	30.50	43.60
Myspace	AFINN	58.31	85.80	60.26	70.79	42.28	39.39	40.78	23.70	63.77	34.55	48.71
	ANEW_SUB	67.05	72.74	90.46	80.63	42.86	27.27	33.33	32.14	13.04	18.56	44.17
	Emolex	37.94	83.66	30.63	44.84	24.00	45.45	31.41	18.35	57.97	27.87	34.71
	Emoticons DS	66.67	68.10	96.72	79.93	42.86	2.27	4.32	24.49	5.80	9.38	31.21
	NRC Hashtag	32.95	83.08	23.79	36.99	21.00	79.55	33.23	17.27	34.30	22.98	31.06
	Opinion Lexicon	41.21	81.19	36.89	50.73	32.37	34.09	33.21	17.66	60.39	27.32	37.09
	PANAS-t	27.76	95.35	11.68	20.81	41.18	5.30	9.40	17.57	96.62	29.74	19.98
	Sentiment140	57.93	75.11	72.65	73.86	27.64	57.58	37.35	16.35	8.21	10.93	40.71
	SentiWordNet	55.72	75.87	68.09	71.77	20.26	35.61	25.82	30.73	26.57	28.50	42.03
Tweets _DBT	AFINN	42.96	33.85	41.92	37.45	60.38	25.38	35.74	29.80	61.00	40.04	37.74
	ANEW_SUB	30.67	22.90	72.33	34.78	52.01	28.02	36.42	44.40	9.13	15.15	28.78
	Emolex	41.48	28.14	27.95	28.04	50.25	40.11	44.61	29.62	50.68	37.39	36.68
	Emoticons DS	23.78	22.75	97.40	36.89	72.73	0.64	1.27	33.33	4.05	7.22	15.13
	NRC Hashtag	45.12	30.19	13.15	18.32	48.27	66.85	56.06	30.81	42.10	35.58	36.65
	Opinion Lexicon	45.24	36.88	36.58	36.73	61.27	28.50	38.91	30.34	66.88	41.75	39.13
	PANAS-t	39.35	29.09	2.19	4.08	64.38	3.76	7.11	28.03	96.19	43.41	18.20
	Sentiment140	40.21	29.54	65.07	40.63	50.26	61.09	55.15	36.36	5.08	8.92	34.90
	SentiWordNet	33.51	23.64	57.81	33.56	48.53	36.99	41.98	40.12	15.97	22.84	32.79
Tweets _RND_I	AFINN	55.09	52.37	59.25	55.60	54.30	33.93	41.76	36.40	62.52	46.01	47.79
	ANEW_SUB	39.20	35.24	92.69	51.07	46.58	21.50	29.42	77.50	11.11	19.44	33.31
	Emolex	48.44	49.41	31.27	38.30	36.34	44.15	39.87	35.19	62.31	44.98	41.05
	Emoticons DS	33.36	32.29	99.25	48.73	86.67	1.37	2.70	40.00	3.69	6.75	19.39
	NRC Hashtag	45.50	51.09	26.27	34.70	33.91	73.87	46.49	37.11	44.91	40.64	40.61
	Opinion Lexicon	55.82	55.99	42.54	48.35	55.91	34.88	42.96	35.79	75.12	48.48	46.60
	PANAS-t	47.78	68.66	6.87	12.48	47.62	6.32	11.16	32.01	96.01	48.02	23.89
	Sentiment140	41.42	40.20	70.22	51.13	39.07	70.07	50.17	43.14	7.73	13.11	38.14
	SentiWordNet	41.68	39.31	69.70	50.27	34.13	45.21	38.89	66.50	20.74	31.62	40.26

Table 13: 3-classes experiments - Plain Lexicons (Without Vader’s Heuristics)

Dataset	Method	Accur.	Posit. Sentiment			Negat. Sentiment			Neut. Sentiment			MacroF1
			P	R	F1	P	R	F1	P	R	F1	
Tweets _RND_III	AFINN	64.12	40.56	65.09	49.97	48.84	47.54	48.18	44.69	67.02	53.62	50.59
	ANEW.SUB	26.78	21.65	93.64	35.16	41.01	29.92	34.60	78.90	6.76	12.45	27.40
	Emolex	58.82	40.06	36.54	38.22	28.07	50.61	36.11	43.42	66.86	52.65	42.32
	Emoticons DS	21.16	19.83	98.24	32.99	90.48	3.89	7.47	37.59	2.08	3.95	14.80
	NRC Hashtag	50.99	39.46	29.91	34.03	25.41	79.71	38.53	43.87	51.61	47.43	40.00
	Opinion Lexicon	69.88	47.72	49.66	48.67	55.59	42.83	48.38	43.95	80.94	56.97	51.34
	PANAS-t	69.77	76.80	12.99	22.22	55.36	6.35	11.40	41.09	98.43	57.98	30.53
	Sentiment140	28.83	24.11	72.12	36.14	27.83	76.02	40.75	44.63	7.19	12.39	29.76
	SentiWordNet	31.72	24.35	71.18	36.29	23.19	49.18	31.52	74.65	16.90	27.56	31.79
Tweets _RND_IV	AFINN	49.60	47.64	57.23	52.00	52.33	37.82	43.90	33.43	50.45	40.22	45.37
	ANEW.SUB	37.80	34.47	88.68	49.65	42.59	19.33	26.59	67.57	11.26	19.31	31.85
	Emolex	46.00	49.11	34.59	40.59	34.09	37.82	35.86	33.68	58.56	42.76	39.74
	Emoticons DS	34.40	32.77	98.11	49.13	83.33	4.20	8.00	37.93	4.95	8.76	21.97
	NRC Hashtag	44.40	50.79	20.13	28.83	33.73	72.27	45.99	36.36	46.85	40.94	38.59
	Opinion Lexicon	52.60	51.85	44.03	47.62	48.19	33.61	39.60	35.17	68.92	46.58	44.60
	PANAS-t	48.20	70.00	8.81	15.64	46.43	10.92	17.69	32.13	96.40	48.20	27.18
	Sentiment140	47.00	44.94	69.81	54.68	46.09	89.08	60.74	43.90	8.11	13.69	43.04
	SentiWordNet	39.20	35.86	65.41	46.33	33.58	38.66	35.94	63.01	20.72	31.19	37.82
Tweets _SAN	AFINN	59.58	27.35	51.64	35.76	48.19	37.24	42.01	43.78	66.82	52.90	43.56
	ANEW.SUB	24.47	16.42	87.67	27.66	38.26	20.80	26.95	77.19	11.32	19.74	24.78
	Emolex	56.63	23.79	25.63	24.68	32.43	41.78	36.52	42.41	67.17	51.99	37.73
	Emoticons DS	17.70	15.15	94.99	26.13	40.00	1.40	2.70	41.34	4.50	8.12	12.32
	NRC Hashtag	46.79	17.23	13.68	15.25	26.44	68.01	38.08	42.56	48.95	45.53	32.96
	Opinion Lexicon	63.49	31.44	38.34	34.55	44.76	32.87	37.90	42.98	76.60	55.06	42.50
	PANAS-t	67.52	46.77	5.59	9.98	18.75	1.57	2.90	40.69	97.47	57.42	23.43
	Sentiment140	25.06	17.77	63.01	27.72	28.62	71.15	40.82	43.36	5.32	9.47	26.01
	SentiWordNet	31.45	17.82	66.47	28.11	27.74	41.61	33.29	78.41	21.17	33.34	31.58
Tweets _Semeval	AFINN	60.05	59.98	60.95	60.46	43.51	40.86	42.14	39.16	64.68	48.79	50.46
	ANEW.SUB	38.51	38.13	97.12	54.76	40.48	18.28	25.19	68.09	1.06	2.08	27.34
	Emolex	46.95	51.66	32.16	39.65	24.94	48.03	32.83	36.03	57.52	44.31	38.93
	Emoticons DS	36.54	36.53	99.96	53.50	50.00	0.12	0.24	33.33	0.03	0.07	17.94
	NRC Hashtag	38.08	52.64	21.55	30.58	20.72	72.16	32.20	35.32	40.80	37.86	33.54
	Opinion Lexicon	59.91	63.17	46.92	53.85	44.17	40.26	42.12	38.16	74.89	50.56	48.84
	PANAS-t	53.93	85.27	12.24	21.40	46.08	5.62	10.01	34.35	97.92	50.85	27.42
	Sentiment140	35.98	42.97	71.39	53.65	25.19	72.04	37.33	0.00	0.00	0.00	30.33
	SentiWordNet	34.65	41.64	72.38	52.87	19.24	47.31	27.36	63.03	3.44	6.52	28.91
RW	AFINN	52.49	59.90	71.28	65.09	50.72	31.67	39.00	28.76	39.30	33.21	45.77
	ANEW.SUB	48.37	47.85	96.69	64.02	58.33	9.50	16.34	53.12	4.99	9.12	29.83
	Emolex	34.70	62.39	28.10	38.75	23.99	59.28	34.16	25.40	28.15	26.70	33.20
	Emoticons DS	46.85	46.70	99.38	63.54	66.67	0.90	1.79	35.00	2.05	3.88	23.07
	NRC Hashtag	29.25	69.89	13.43	22.53	23.95	82.81	37.16	23.48	17.01	19.73	26.47
	Opinion Lexicon	48.76	59.84	61.57	60.69	43.96	36.20	39.70	26.51	38.71	31.47	43.95
	PANAS-t	34.80	53.76	10.33	17.33	26.87	8.14	12.50	25.04	86.80	38.87	22.90
	Sentiment140	46.46	59.54	63.84	61.62	33.60	77.38	46.85	25.00	1.76	3.29	37.25
	SentiWordNet	47.13	53.37	76.86	63.00	33.79	44.34	38.36	38.98	6.74	11.50	37.62