

Model	pre-processing	f1-score	f1-score-1	f1-score-2	f1-score-3
cnn	Nothing	0,505	0,503	0,498	0,515
fast_text	Nothing	0,530	0,525	0,534	0,531
b_lstm	Nothing	0,511	0,501	0,552	0,480
lstm	Nothing	0,556	0,569	0,552	0,546
kim	Nothing	0,558	0,555	0,576	0,544
cnn	Stemmer	0,496	0,458	0,486	0,543
fast_text	Stemmer	0,531	0,539	0,548	0,506
b_lstm	Stemmer	0,475	0,437	0,482	0,505
lstm	Stemmer	0,499	0,448	0,577	0,471
kim	Stemmer	0,531	0,553	0,509	0,531
cnn	Stemmer+StopWords	0,476	0,506	0,470	0,452
fast_text	Stemmer+StopWords	0,529	0,513	0,526	0,549
b_lstm	Stemmer+StopWords	0,476	0,516	0,434	0,477
lstm	Stemmer+StopWords	0,553	0,585	0,507	0,568
kim	Stemmer+StopWords	0,511	0,465	0,524	0,544
cnn	Stemmer+StopWords+Cleaning	0,519	0,509	0,510	0,538
fast_text	Stemmer+StopWords+Cleaning	0,560	0,572	0,561	0,546
b_lstm	Stemmer+StopWords+Cleaning	0,522	0,492	0,579	0,494
lstm	Stemmer+StopWords+Cleaning	0,578	0,636	0,531	0,568
kim	Stemmer+StopWords+Cleaning	0,508	0,511	0,522	0,491
cnn	Stemmer+StopWords+Cleaning+mentions	0,546	0,545	0,528	0,565
fast_text	Stemmer+StopWords+Cleaning+mentions	0,546	0,569	0,525	0,543
b_lstm	Stemmer+StopWords+Cleaning+mentions	0,477	0,454	0,485	0,491
lstm	Stemmer+StopWords+Cleaning+mentions	0,571	0,556	0,568	0,589
kim	Stemmer+StopWords+Cleaning+mentions	0,536	0,545	0,516	0,546
cnn	Stemmer+StopWords+Cleaning+Mentions+Numbers	0,532	0,526	0,559	0,510
fast_text	Stemmer+StopWords+Cleaning+Mentions+Numbers	0,534	0,545	0,527	0,530
b_lstm	Stemmer+StopWords+Cleaning+Mentions+Numbers	0,510	0,532	0,512	0,486
lstm	Stemmer+StopWords+Cleaning+Mentions+Numbers	0,555	0,548	0,551	0,566
kim	Stemmer+StopWords+Cleaning+Mentions+Numbers	0,515	0,483	0,525	0,536
cnn	Stemmer+StopWords+Cleaning+Mentions+Numbers+Emoji	0,527	0,525	0,54	0,515
fast_text	Stemmer+StopWords+Cleaning+Mentions+Numbers+Emoji	0,542	0,575	0,532	0,518
b_lstm	Stemmer+StopWords+Cleaning+Mentions+Numbers+Emoji	0,537	0,544	0,511	0,555
lstm	Stemmer+StopWords+Cleaning+Mentions+Numbers+Emoji	0,564	0,573	0,553	0,565
kim	Stemmer+StopWords+Cleaning+Mentions+Numbers+Emoji	0,518	0,521	0,515	0,519
cnn	Stemmer+StopWords+Cleaning+Mentions+Numbers+Emoji+Hashtags	0,551	0,519	0,563	0,572
fast_text	Stemmer+StopWords+Cleaning+Mentions+Numbers+Emoji+Hashtags	0,567	0,561	0,564	0,576
b_lstm	Stemmer+StopWords+Cleaning+Mentions+Numbers+Emoji+Hashtags	0,529	0,5	0,534	0,552
lstm	Stemmer+StopWords+Cleaning+Mentions+Numbers+Emoji+Hashtags	0,540	0,551	0,576	0,494
kim	Stemmer+StopWords+Cleaning+Mentions+Numbers+Emoji+Hashtags	0,511	0,519	0,522	0,492
cnn	Cleaning+Mentions+Numbers+Emoji	0,543	0,561	0,538	0,53
fast_text	Cleaning+Mentions+Numbers+Emoji	0,568	0,584	0,515	0,604
b_lstm	Cleaning+Mentions+Numbers+Emoji	0,555	0,544	0,558	0,563
lstm	Cleaning+Mentions+Numbers+Emoji	0,546	0,441	0,633	0,564
kim	Cleaning+Mentions+Numbers+Emoji	0,548	0,561	0,545	0,537
cnn	StopWords+Cleaning+Mentions+Numbers+Emoji	0,545	0,523	0,524	0,587
fast_text	StopWords+Cleaning+Mentions+Numbers+Emoji	0,570	0,555	0,599	0,557
b_lstm	StopWords+Cleaning+Mentions+Numbers+Emoji	0,539	0,51	0,545	0,562
lstm	StopWords+Cleaning+Mentions+Numbers+Emoji	0,548	0,564	0,488	0,593
kim	StopWords+Cleaning+Mentions+Numbers+Emoji	0,548	0,571	0,53	0,542
cnn	Cleaning	0,559	0,557	0,555	0,565
fast_text	Cleaning	0,565	0,58	0,543	0,571
b_lstm	Cleaning	0,485	0,494	0,474	0,488
lstm	Cleaning	0,434	0,472	0,282	0,548
kim	Cleaning	0,577	0,579	0,567	0,585
cnn	Cleaning+Emoji	0,571	0,538	0,597	0,578
fast_text	Cleaning+Emoji	0,548	0,548	0,536	0,56
b_lstm	Cleaning+Emoji	0,499	0,517	0,474	0,507
lstm	Cleaning+Emoji	0,521	0,528	0,457	0,578
kim	Cleaning+Emoji	0,589	0,587	0,598	0,581