Accuracy	blue means defa	ult value was best	(or within 1%)				
Fastlext	green means a n	ew value was bes	st				
Epochs	red means bad p	arameters					
Epochs							
Epochs							
Accuracy	Fasttext						
Training time (s)	Epochs	10	20	40	80	60	70
Epochs	Accuracy	0.39	0.67	0.82	0.85	0.84	0.84
Accuracy 0.85 0.852 0.852 0.853 0.85 0.85 17aining time (s) 3 4 4 4 5 6 6 111 Learning rate 0.3 0.2 0.1 0.01 0.01 8.800 epochs Accuracy 0.852 0.854 0.85 0.39 0.85 Training time (s) 4 4 4 3.89 28 Dimensions 2 3 4 5 10 15 Accuracy 0.64 0.8 0.827 0.843 0.849 0.85 Training time (s) 2.7 3 0.25 2 2 2 2 Dimensions 20 25 50 100 200 400 Accuracy 0.85 0.854 0.85 0.85 0.85 0.85 Training time (s) 2 2 3 4 5 7 Dimensions 20 25 50 100 200 400 Accuracy 0.85 0.854 0.85 0.85 0.85 0.85 Training time (s) 2 2 3 4 5 7 WordNGrams 1 2 3 4 5 7 WordNGrams 1 2 3 4 5 7 WordNGrams 1 2 3 Accuracy 0.85 0.82 0.79 Training time (s) 4 9 18 Note: this technique was best for quick results, but not as good as yake overall remove bunctuat remove stopworc lemmatizing stemming Accuracy 0.856 0.868 0.88 0.875 0.87 Training time (s) 4 4 2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially Yake keywords 0.5 0.6 0.7 0.8 0.9 1 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.902 0.887 0.887 Training time (s) 2.4 2.4 2.7 Pretrained Vectoi dim=300 epoch=200	Training time (s)	0.6	0.9	1.6	3	2	2
Accuracy 0.85 0.852 0.852 0.853 0.85 0.85 17aining time (s) 3 4 4 4 5 6 6 111 Learning rate 0.3 0.2 0.1 0.01 0.01 8.800 epochs Accuracy 0.852 0.854 0.85 0.39 0.85 Training time (s) 4 4 4 3.89 28 Dimensions 2 3 4 5 10 15 Accuracy 0.64 0.8 0.827 0.843 0.849 0.85 Training time (s) 2.7 3 0.25 2 2 2 2 Dimensions 20 25 50 100 200 400 Accuracy 0.85 0.854 0.85 0.85 0.85 0.85 Training time (s) 2 2 3 4 5 7 Dimensions 20 25 50 100 200 400 Accuracy 0.85 0.854 0.85 0.85 0.85 0.85 Training time (s) 2 2 3 4 5 7 WordNGrams 1 2 3 4 5 7 WordNGrams 1 2 3 4 5 7 WordNGrams 1 2 3 Accuracy 0.85 0.82 0.79 Training time (s) 4 9 18 Note: this technique was best for quick results, but not as good as yake overall remove bunctuat remove stopworc lemmatizing stemming Accuracy 0.856 0.868 0.88 0.875 0.87 Training time (s) 4 4 2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially Yake keywords 0.5 0.6 0.7 0.8 0.9 1 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.902 0.887 0.887 Training time (s) 2.4 2.4 2.7 Pretrained Vectoi dim=300 epoch=200							
Training time (s)	Epochs	80	100	120	140	160	320
Learning rate 0.3 0.2 0.1 0.01 0.01 & 800 epochs Accuracy 0.852 0.854 0.85 0.39 0.85 Training time (s) 4 4 4 3.89 28 Dimensions 2 3 4 5 10 15 Accuracy 0.64 0.8 0.827 0.843 0.849 0.85 Training time (s) 2.7 3 2.5 2 2 2 2 Dimensions 20 25 50 100 200 400 Accuracy 0.85 0.854 0.85 0.85 0.85 0.85 0.85 Training time (s) 2 2 3 4 5 7 WordNGrams 1 2 3 5 0.85 0.85 0.85 0.85 Note: this technique was best for quick results, but not as good as yake overall Preprocessing Lowercase remove punctual remove stopword lemmatizing stemming Accuracy 0.856 0.886 0.88 0.88 0.875 0.87 Training time (s) 4 4 4 4.2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially Yake keywords 0.5 0.6 0.7 0.8 0.9 11 Note: it took 33 mins to preprocess the yake keywords initially Yake keywords 0.5 0.6 0.7 0.8 0.9 18 Training time (s) 1.5 1.5 2 2 2 2 2 2 2 Preprocessing (a Lowercase remove punctual remove stopwords Training time (s) 1.5 1.5 2 2 2 2 2 2 2 2 Training time (s) 2.4 2.4 2.7 2.7 Pretrained Vecto dim=300 epoch=200	Accuracy	0.85	0.852	0.852	0.853	0.85	0.85
Accuracy 0.852 0.854 0.85 0.39 0.855 Training time (s) 4 4 4 4 3.89 28 Dimensions 2 3 3 4 5 10 15 Accuracy 0.64 0.8 0.827 0.843 0.849 0.855 Training time (s) 2.7 3 2.5 2 2 2 2 Dimensions 20 25 50 100 200 400 Accuracy 0.85 0.854 0.85 0.85 0.85 0.85 Training time (s) 2 2 3 4 5 7 WordNGrams 1 2 3 4 5 7 WordNGrams 1 2 3 4 5 7 WordNGrams 1 9 18 Note: this technique was best for quick results, but not as good as yake overall Preprocessing Lowercase remove punctuat remove stopword lemmatizing stemming Accuracy 0.856 0.868 0.88 0.875 0.87 Training time (s) 4 4 4.2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially Yake keywords 0.5 0.6 0.7 0.8 0.9 14 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 2.4 2.4 2.7 Pretrained Vecto dim=300 epoch=200	Training time (s)	3	4	4	5	6	11
Accuracy 0.852 0.854 0.85 0.39 0.855 Training time (s) 4 4 4 4 3.89 28 Dimensions 2 3 3 4 5 10 15 Accuracy 0.64 0.8 0.827 0.843 0.849 0.855 Training time (s) 2.7 3 2.5 2 2 2 2 Dimensions 20 25 50 100 200 400 Accuracy 0.85 0.854 0.85 0.85 0.85 0.85 Training time (s) 2 2 3 4 5 7 WordNGrams 1 2 3 4 5 7 WordNGrams 1 2 3 4 5 7 WordNGrams 1 9 18 Note: this technique was best for quick results, but not as good as yake overall Preprocessing Lowercase remove punctuat remove stopword lemmatizing stemming Accuracy 0.856 0.868 0.88 0.875 0.87 Training time (s) 4 4 4.2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially Yake keywords 0.5 0.6 0.7 0.8 0.9 14 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 2.4 2.4 2.7 Pretrained Vecto dim=300 epoch=200							
Training time (s)	Learning rate	0.3	0.2	0.1	0.01	0.01 & 800 epoch	าร
Dimensions 2 3 4 5 10 15 Accuracy 0.64 0.8 0.827 0.843 0.849 0.85 Training time (s) 2.7 3 2.5 2 2 2 2 Dimensions 20 25 50 100 200 400 Accuracy 0.85 0.854 0.85 0.85 0.848 Training time (s) 2 2 3 4 5 7 WordNGrams 1 2 3 4 5 7 WordScareacy 0.85 0.82 0.79 18 8 18 18 9 18 18 19 19 10 10 10 10 <	Accuracy	0.852	0.854	0.85	0.39	0.85	
Accuracy 0.64 0.8 0.827 0.843 0.849 0.85 Training time (s) 2.7 3 2.5 2 2 2 Dimensions 20 25 50 100 200 400 Accuracy 0.85 0.85 0.854 0.85 0.85 0.85 0.85 Training time (s) 2 2 3 4 5 7 WordNGrams 1 2 3 3 4 5 7 WordNGrams 1 2 3 3 4 5 7 WordNGrams 4 9 18 Note: this technique was best for quick results, but not as good as yake overall Preprocessing Lowercase remove punctual remove stopword lemmatizing stemming Accuracy 0.856 0.868 0.88 0.875 Training time (s) 4.4 4.2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially Yake keywords 0.5 0.6 0.7 0.8 0.9 11 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 2 Preprocessing (a Lowercase remove punctual remove stopwords Accuracy 0.902 0.887 0.887 Training time (s) 2.4 2.4 2.7 Pretrained Vecto dim=300 epoch=200	Training time (s)	4	4	4	3.89	28	
Accuracy 0.64 0.8 0.827 0.843 0.849 0.85 Training time (s) 2.7 3 2.5 2 2 2 Dimensions 20 25 50 100 200 400 Accuracy 0.85 0.85 0.854 0.85 0.85 0.85 0.85 Training time (s) 2 2 3 4 5 7 WordNGrams 1 2 3 3 4 5 7 WordNGrams 1 2 3 3 4 5 7 WordNGrams 4 9 18 Note: this technique was best for quick results, but not as good as yake overall Preprocessing Lowercase remove punctual remove stopword lemmatizing stemming Accuracy 0.856 0.868 0.88 0.875 Training time (s) 4.4 4.2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially Yake keywords 0.5 0.6 0.7 0.8 0.9 11 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 2 Preprocessing (a Lowercase remove punctual remove stopwords Accuracy 0.902 0.887 0.887 Training time (s) 2.4 2.4 2.7 Pretrained Vecto dim=300 epoch=200							
Training time (s) 2.7 3 2.5 2 2 2 Dimensions 20 25 50 100 200 400 Accuracy 0.85 0.854 0.85 0.85 0.85 0.848 Training time (s) 2 2 2 3 4 5 7 WordNGrams 1 2 3 4 5 7 WordNGrams 1 2 3 4 5 7 WordNGrams 4 9 18	Dimensions	2	3	4	5	10	15
Dimensions 20 25 50 100 200 400 Accuracy 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.84 0.85 0.85 0.85 0.84 0.85 0.85 0.84 0.85 0.85 0.82 0.79 0.85 0.82 0.79 0.85 0.82 0.79 0.85 0.82 0.79 0.85 0.86 0.86 0.86 0.86 0.86 0.86 0.86 0.86 0.86 0.87	Accuracy	0.64	0.8	0.827	0.843	0.849	0.85
Accuracy 0.85 0.854 0.85 0.85 0.85 0.848 Training time (s) 2 2 3 3 4 5 7 WordNGrams 1 2 3 3	Training time (s)	2.7	3	2.5	2	2	2
Accuracy 0.85 0.854 0.85 0.85 0.85 0.848 Training time (s) 2 2 3 3 4 5 7 WordNGrams 1 2 3 3							
Training time (s) 2 2 3 4 5 7 WordNGrams 1 2 3 4 5 7 Accuracy 0.85 0.82 0.79 Training time (s) 4 9 18 Note: this technique was best for quick results, but not as good as yake overall Preprocessing Lowercase remove punctuat remove stopword lemmatizing stemming Accuracy 0.856 0.868 0.88 0.875 0.87 Training time (s) 4.4 4.2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially Yake keywords 0.5 0.6 0.7 0.8 0.9 11 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.902 0.887 0.887 Training time (s) 2.4 2.4 2.7 Pretrained Vector dim=300 epoch=200	Dimensions	20	25	50	100	200	400
WordNGrams 1 2 3 Accuracy 0.85 0.82 0.79 Training time (s) 4 9 18 Note: this technique was best for quick results, but not as good as yake overall Preprocessing Lowercase remove punctuat remove stopword lemmatizing stemming Accuracy 0.856 0.868 0.88 0.875 0.87 Training time (s) 4.4 4.2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially Yake keywords 0.5 0.6 0.7 0.8 0.9 1 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.902 0.887 0.887 Training time (s) 2.4 2.4 2.7 2 2 2 Pretrained Vecto dim=300 epoch=200 4 2.7 4 2.7	Accuracy	0.85	0.854	0.85	0.85	0.85	0.848
Accuracy	Training time (s)	2	2	3	4	5	7
Accuracy							
Training time (s) 4 9 18 Note: this technique was best for quick results, but not as good as yake overall Preprocessing Lowercase remove punctuat remove stopword lemmatizing stemming Accuracy 0.856 0.868 0.88 0.875 0.87 Training time (s) 4.4 4.2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially Yake keywords 0.5 0.6 0.7 0.8 0.9 1 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.902 0.887 0.887 Training time (s) 2.4 2.4 2.7 Pretrained Vecto dim=300 epoch=200	WordNGrams	1	2	3			
Note: this technique was best for quick results, but not as good as yake overall Preprocessing	Accuracy	0.85	0.82	0.79			
Preprocessing Accuracy Lowercase remove punctuat remove stopword lemmatizing stemming Accuracy 0.856 0.868 0.88 0.875 0.87 Training time (s) 4.4 4.2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially 9 1 1 1 Yake keywords 0.5 0.6 0.7 0.8 0.9 1 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.902 0.887 0.887 0.887 0.897 0.887	Training time (s)	4	9	18			
Preprocessing Accuracy Lowercase remove punctuat remove stopword lemmatizing stemming Accuracy 0.856 0.868 0.88 0.875 0.87 Training time (s) 4.4 4.2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially 9 1 1 1 Yake keywords 0.5 0.6 0.7 0.8 0.9 1 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.902 0.887 0.887 0.887 0.897 0.887							
Accuracy 0.856 0.868 0.88 0.875 0.87 Training time (s) 4.4 4.2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially Yake keywords 0.5 0.6 0.7 0.8 0.9 1 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.902 0.887 0.887 Training time (s) 2.4 2.4 2.7 Pretrained Vecto dim=300 epoch=200	Note: this technic	que was best for q	uick results, but n	ot as good as yak	e overall		
Training time (s) 4.4 4.2 3.5 7 17 Note: it took 33 mins to preprocess the yake keywords initially 9 0.5 0.6 0.7 0.8 0.9 0.9 0.8 0.9 0.8 0.9 0.8 0.9 0.8 0.9 0.8 0.9 0.8	Preprocessing	Lowercase	remove punctuat	remove stopword	lemmatizing	stemming	
Note: it took 33 mins to preprocess the yake keywords initially Yake keywords 0.5 0.6 0.7 0.8 0.9 1 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.902 0.887 0.887 Training time (s) 2.4 2.4 2.7 Pretrained Vecto dim=300 epoch=200	Accuracy	0.856	0.868	0.88	0.875	0.87	
Yake keywords 0.5 0.6 0.7 0.8 0.9 1 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.902 0.887 0.887 0.887 Training time (s) 2.4 2.4 2.7 2.7 2.7 Pretrained Vecto dim=300 epoch=200 Epoc	Training time (s)	4.4	4.2	3.5	7	17	
Yake keywords 0.5 0.6 0.7 0.8 0.9 1 Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.902 0.887 0.887 0.887 Training time (s) 2.4 2.4 2.7 2.7 2.7 Pretrained Vecto dim=300 epoch=200 Epoc							
Accuracy 0.813 0.837 0.88 0.885 0.89 0.89 Training time (s) 1.5 1.5 2 2 2 2 2 Preprocessing (a Lowercase Accuracy 0.902 0.887 0.887 0.887 0.887 Training time (s) 2.4 2.4 2.7 2.7 2.7 Pretrained Vectored Vectored Accuracy 0.902 epoch=200 epoch=200 <td>Note: it took 33 n</td> <td>nins to preprocess</td> <td>s the yake keywor</td> <td>ds initially</td> <td></td> <td></td> <td></td>	Note: it took 33 n	nins to preprocess	s the yake keywor	ds initially			
Training time (s) 1.5 1.5 2 2 2 2 Preprocessing (a Accuracy 0.902 0.887 0.887 0.887 Training time (s) 2.4 2.4 2.7 Pretrained Vector dim=300 epoch=200	Yake keywords	0.5	0.6	0.7	0.8	0.9	1
Preprocessing (a Lowercase remove punctuat remove stopwords Accuracy 0.902 0.887 0.887 Training time (s) 2.4 2.4 2.7 Pretrained Vecto dim=300 epoch=200	Accuracy	0.813	0.837	0.88	0.885	0.89	0.89
Accuracy 0.902 0.887 0.887 Training time (s) 2.4 2.4 2.7 Pretrained Vector dim=300 epoch=200	Training time (s)	1.5	1.5	2	2	2	2
Accuracy 0.902 0.887 0.887 Training time (s) 2.4 2.4 2.7 Pretrained Vector dim=300 epoch=200							
Training time (s) 2.4 2.4 2.7 Pretrained Vector dim=300 epoch=200	Preprocessing (a	Lowercase	remove punctuat	remove stopword	ls		
Pretrained Vector dim=300 epoch=200	Accuracy	0.902	0.887	0.887			
	Training time (s)	2.4	2.4	2.7			
	Pretrained Vecto	dim=300	epoch=200				
			0.905				
Training time (s) 95 105	Training time (s)	95	105				