# **■ LSTM RESULT** Notifications Description 3.1 LSTM - Hyperparameter Tuning <a> </a> **lemmatization** = nlp\_id vectorizer = CountVectorizer 3.2 LSTM - Hyperparameter Tuning **lemmatization** = nlp\_id vectorizer = TF-IDF 3.3 LSTM - Hyperparameter Tuning **lemmatization** = nlp\_id vectorizer = Word2Vec 3 1 STM - Hynarnarameter Tuning 🕶 ✓ Show more **Attachments** Files image.png Added 20 Sept 2024, 19:46 image.png Added 20 Sept 2024, 19:46

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### 3.6 LSTM - Hyperparameter Tuning

**lemmatization** = nlp\_id

vectorizer = GPT

Best val\_accuracy So Far: 0.5910652875900269 Total elapsed time: 00h 02m 21s Best Hyperparameters:

{'units': 160, 'dropout': 0.30000000000000000, 'dense\_units': 128, 'optimizer': 'adam'}

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Test Accuracy: Classification	0.512396694214876 Report:				
	precision	recall	f1-score	support	
negative	0.53	0.57	0.55	115	
neutral	0.47	0.61	0.53	118	
positive	0.55	0.37	0.44	130	
accuracy			0.51	363	
macro avg	0.52	0.52	0.51	363	
weighted avg	0.52	0.51	0.51	363	

#### **Confusion Matrix** 70 66 28 21 60 - 50 28 72 18 - 40 - 30 30 52 48 - 20 negative positive neutral Predicted



### 3.5 LSTM - Hyperparameter Tuning

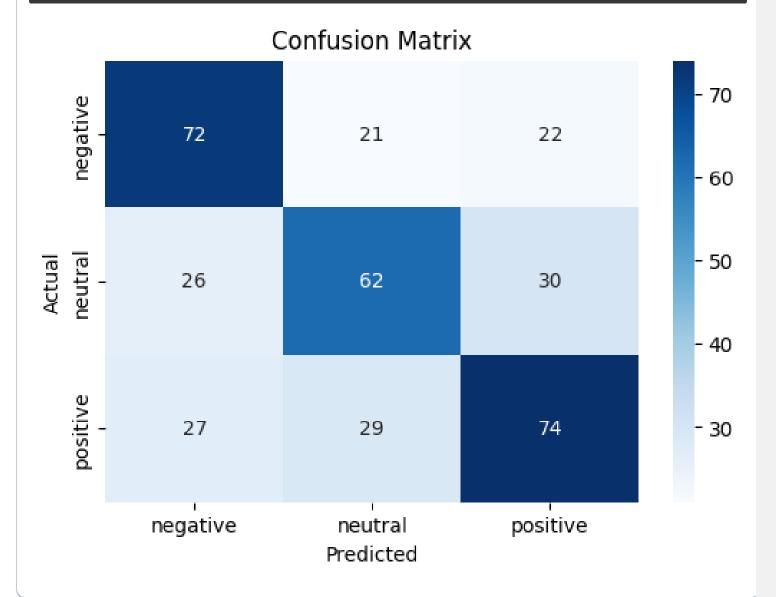
**lemmatization** = nlp\_id

vectorizer = RoBERTa

Best val\_accuracy So Far: 0.6219931244850159 Total elapsed time: 00h 02m 14s Best Hyperparameters:

['units': 64, 'dropout': 0.4, 'dense\_units': 128, 'optimizer': 'adam'}

	_			
Test Accuracy: Classification	0.5730027548209367 Report:			
	precision	recall	f1-score	support
negative	0.58	0.63	0.60	115
neutral	0.55	0.53	0.54	118
positive	0.59	0.57	0.58	130
accuracy			0.57	363
macro avg	0.57	0.57	0.57	363
weighted avg	0.57	0.57	0.57	363



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### 3.4 LSTM - Hyperparameter Tuning

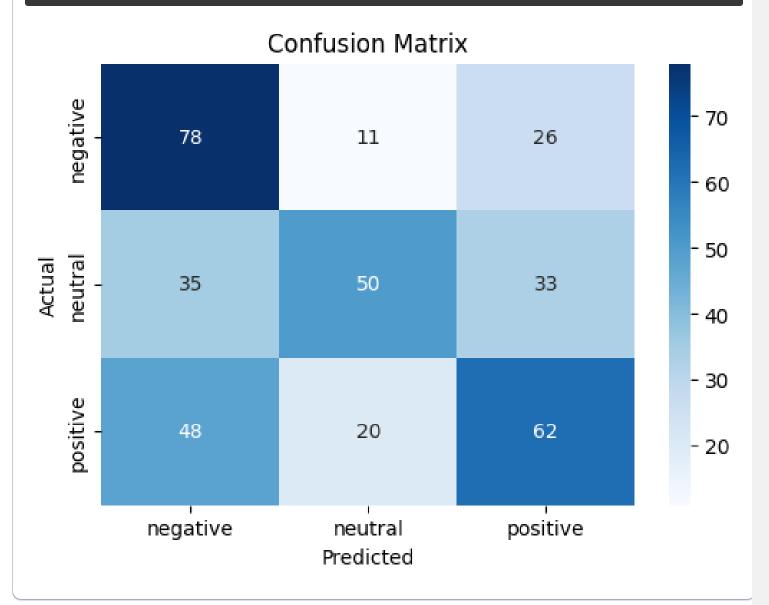
**lemmatization** = nlp\_id

vectorizer = BERT

Best val\_accuracy So Far: 0.6254295706748962 Total elapsed time: 00h 02m 58s Best Hyperparameters:

{'units': 224, 'dropout': 0.3000000000000000, 'dense\_units': 96, 'optimizer': 'adam'}

	•		1 2		
Test Accuracy: Classification	0.5234159779614325 Report:				
	precision	recall	f1-score	support	
negative	0.48	0.68	0.57	115	
neutral	0.62	0.42	0.50	118	
positive	0.51	0.48	0.49	130	
accuracy			0.52	363	
macro avg	0.54	0.53	0.52	363	
weighted avg	0.54	0.52	0.52	363	





### 3.3 LSTM - Hyperparameter Tuning

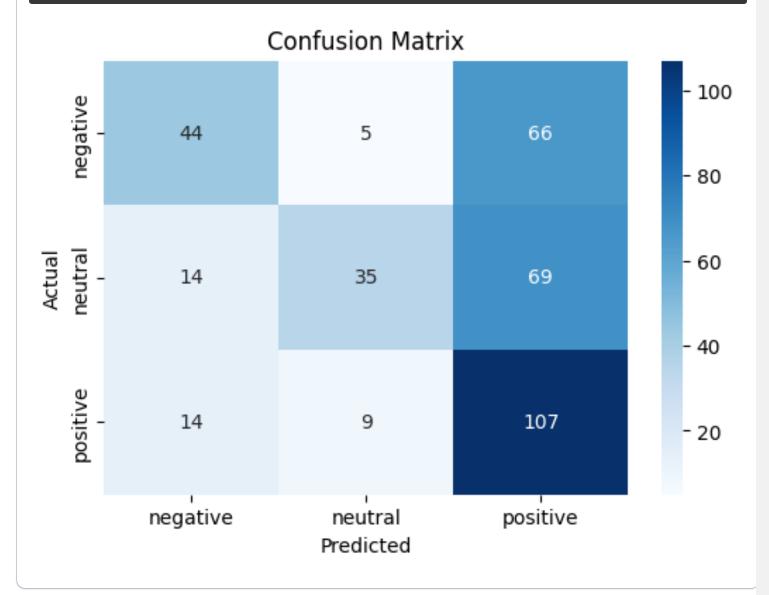
**lemmatization** = nlp\_id

vectorizer = Word2Vec

Best val\_accuracy So Far: 0.4536082446575165 Total elapsed time: 00h 03m 24s Best Hyperparameters:

{'units': 96, 'dropout': 0.4, 'dense\_units': 128, 'optimizer': 'adam'}

•	Accuracy: 0.512396694214876 sification Report:				
	precision	recall	f1-score	support	
negative	0.61	0.38	0.47	115	
neutral	0.71	0.30	0.42	118	
positive	0.44	0.82	0.58	130	
accuracy			0.51	363	
macro avg	0.59	0.50	0.49	363	
weighted avg	0.58	0.51	0.49	363	





### 3.2 LSTM - Hyperparameter Tuning

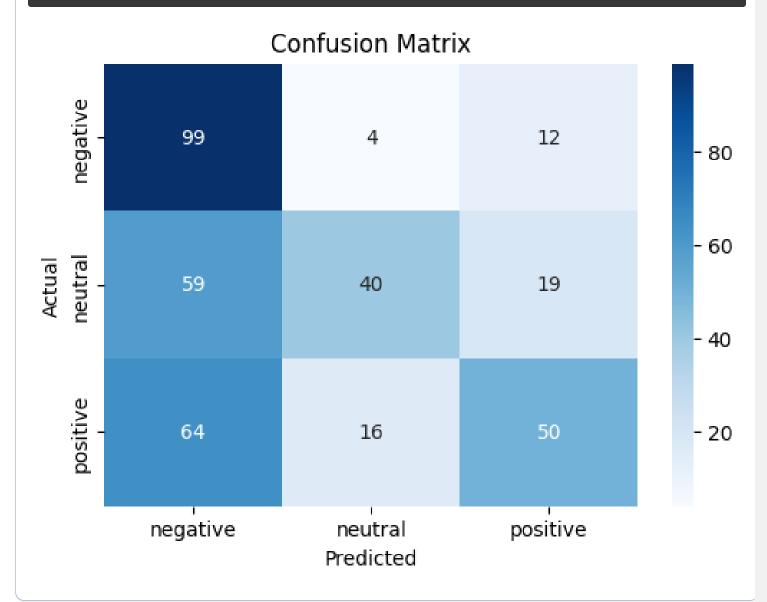
**lemmatization** = nlp\_id

vectorizer = TF-IDF

Best val\_accuracy So Far: 0.35738831758499146 Total elapsed time: 00h 07m 18s Best Hyperparameters:

{'units': 192, 'dropout': 0.3000000000000000, 'dense\_units': 96, 'optimizer': 'adam'}

Test Accuracy: Classification	0.5206611570247934 Report:			
	precision	recall	f1-score	support
negative	0.45	0.86	0.59	115
neutral	0.67	0.34	0.45	118
positive	0.62	0.38	0.47	130
accuracy			0.52	363
macro avg	0.58	0.53	0.50	363
weighted avg	0.58	0.52	0.50	363





## 3.1 LSTM - Hyperparameter Tuning

**lemmatization** = nlp\_id

vectorizer = CountVectorizer

Best val\_accuracy So Far: 0.3711340129375458 Total elapsed time: 00h 09m 02s Best Hyperparameters:

{'units': 256, 'dropout': 0.4, 'dense\_units': 128, 'optimizer': 'adam'}

tunits . 250, diopout . 0.4, dense_units . 128, optimizer . adam j					
Test Accuracy: 0.3581267217630854					
Classification	Report:				
	precision	recall	f1-score	support	
negative	0.00	0.00	0.00	115	
neutral	0.00	0.00	0.00	118	
positive	0.36	1.00	0.53	130	
accuracy			0.36	363	
macro avg	0.12	0.33	0.18	363	
weighted avg	0.13	0.36	0.19	363	

#### Confusion Matrix 120 0 0 115 - 100 - 80 Actual neutral 0 118 - 60 - 40 0 0 130 - 20 - 0 negative positive neutral Predicted

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**Kaira Milani Fitria** added this card to Analyze & Findings 19 Sept 2024, 17:32