CNN 1 layer

Layer (type) Output Shape Param #

\_\_\_\_\_\_

conv1d\_1 (Conv1D) (None, 1024, 64) 256

max\_pooling1d\_1 (MaxPooling1 (None, 512, 64) 0

flatten\_1 (Flatten) (None, 32768) 0

dense\_1 (Dense) (None, 128) 4194432

\_\_\_\_\_

dropout\_1 (Dropout) (None, 128) 0

\_\_\_\_\_

dense\_2 (Dense) (None, 25) 3225

\_\_\_\_\_\_

Total params: 4,197,913

Trainable params: 4,197,913

Non-trainable params: 0

**CNN 2 layer** 

\_\_\_\_\_\_\_

Layer (type) Output Shape Param #

\_\_\_\_\_\_

conv1d\_1 (Conv1D) (None, 1024, 64) 256

\_\_\_\_\_

max\_pooling1d\_1 (MaxPooling1 (None, 512, 64)

conv1d_2 (Conv1D)	(None, 512, 12	28) 24704			
max_pooling1d_2 (MaxPooling1 (None, 256, 128) 0					
flatten_1 (Flatten)	(None, 32768)	0			
dense_1 (Dense)	(None, 128)	4194432			
dropout_1 (Dropout)	(None, 128)	0			
dense_2 (Dense)	(None, 25)	3225			

Total params: 4,222,617

Trainable params: 4,222,617

Non-trainable params: 0

## CNN 1 layer with LSTM

Layer (type)	Output Shape	Param #			
==========	==========				
conv1d_1 (Conv1E	) (None, 1024	, 64) 256			
max_pooling1d_1 (MaxPooling1 (None, 512, 64) 0					
	(None, 70)	37800			

dropout\_1 (Dropout) (None, 70) 0

dense\_1 (Dense) (None, 25) 1775

\_\_\_\_\_

Total params: 39,831

Trainable params: 39,831

Non-trainable params: 0

## **CNN 2 layer with LSTM**

Layer (type)	Output Shape	Param #				
==========		=======	=======================================			
conv1d_1 (Conv1D)	(None, 1024,	64) 256				
max_pooling1d_1 (MaxPooling1 (None, 512, 64) 0						
conv1d_2 (Conv1D)	(None, 512, 1	28) 2470	04			
max_pooling1d_2 (MaxPooling1 (None, 256, 128) 0						
lstm_1 (LSTM)	(None, 70)	55720				
dropout_1 (Dropout	(None, 70)	0				
dense_1 (Dense)		1775				
dropout_1 (Dropout  dense_1 (Dense)	(None, 70) (None, 25)	0 1775				

Total params: 82,455

Trainable params: 82,455

Non-trainable params: 0

\_\_\_\_\_