

Hyperparameter	Skip-thought	External Features	TF-IDF Vectors
MLP layers	2	1	2
MLP neurons	500 ; 100	50	500 ; 50
Dropout	0.2 ; -	-	0.4 ; -
Activation	sigmoid ; sigmoid	relu	relu ; relu
Regularization	L2 - 0.00000001 ; -	-	L2 - 0.00005 ; -
MLP Layers	1		
MLP neurons	4		
Activation	Softmax		
Optimizer	Adam		
Learning rate	0.001		
Batch size	100		
Loss	Cross-entropy		