

Training											
Pretrained Language Model	Contextual Size	Hyperparameters							Number of words per each Topic	Evaluation Metric	
		Model-type	Drop-Out	Batch Size	Learning Rate	Solver	Number of Topics (Number of Components)	Number of Epochs		CoherenceNPMI	TopicDiversity
all-mpnet-base-v2	768	ProdLDA	0.2	32	1.00E-07	adam	10	100	10	-0.26	0.95
							20			-0.25	0.93
							30			-0.27	0.91
							50			-0.24	0.89
							100			-0.25	0.8
		ProdLDA	0.2	32	15	adam	10	100	10	0.136	0.9
							20			-0.08	0.58
							30			0.11	0.79
							50			0.02	0.5
							100			0.06	0.4
		ProdLDA	0.2	1024	1.00E-07	adam	10	100	10	-0.23	0.98
							20			-0.25	0.94
							30			-0.24	0.94
							50			-0.25	0.91
							100			-0.26	0.79
		ProdLDA	0.2	1024	15	adam	10	100	10	-0.12	0.75
							20			-0.17	0.73
							30			-0.11	0.7
							50			-0.08	0.59
							100			-0.14	0.49

Conclusion: 1. Lesser the learning rate, lower the coherence. 2. Out of this 4 combinations, the last combination of high learning rate and large batch size gives us topics with much lesser coherence and much less topic diversity. So, we can conclude that we have somewhat achieved posterior collapse because in posterior collapse as the latent structure is not learned during training it gives us topics which are more or less similar i.e not diverse.