

cases	doc_1		doc_2				decision	id
			authors	<ul style="list-style-type: none">Iryna GurevychNils Reimers			DUPLICATES	320
	title	Sentence-BERT: Sentence Embeddings using Siamese BERT-Networks	publication_date	2019-08-27 00:00:00				
	source	SupportedSources.OPENALEX	journal	arXiv (Cornell University)				
	volume		doi	None				
	urls	<ul style="list-style-type: none">https://openalex.org/W2971193649	id	id8510547945187807396				
	abstract		versions					
	abstract		abstract	BERT (Devlin et al., 2018) and RoBERTa (Liu et al., 2019) has set a new state-of-the-art performance on sentence-pair regression tasks like semantic textual similarity (STS). However, it requires that both sentences are fed into the network, which causes a massive computational overhead: Finding the most similar pair in a collection of 10,000 sentences requires about 50 million inference computations (~65 hours) with BERT. The construction of BERT makes it unsuitable for semantic similarity search as well as for unsupervised tasks like clustering. In this publication, we present Sentence-BERT (SBERT), a modification of the pretrained BERT network that use siamese and triplet network structures to derive semantically meaningful sentence embeddings that can be compared using cosine-similarity. This reduces the effort for finding the most similar pair from 65 hours with BERT / RoBERTa to about 5 seconds with SBERT, while maintaining the accuracy from BERT. We evaluate SBERT and SRoBERTa on common STS tasks and transfer learning tasks, where it outperforms other state-of-the-art sentence embeddings methods.				
	versions		versions					
	authors	<ul style="list-style-type: none">Nils ReimersIryna Gurevych	title	Sentence-BERT: Sentence Embeddings using Siamese BERT-Networks				
	publication_date	2019-08-27 00:00:00	source	SupportedSources.PAPERS_WITH_CODE				
	journal	arXiv (Cornell University)	journal					
	volume		volume					
	doi	None	doi					
	urls	<ul style="list-style-type: none">https://arxiv.org/pdf/1908.10084v1.pdfhttps://github.com/UKPLab/sentence-transformershttps://aclanthology.org/D19-1410.pdf	urls	<ul style="list-style-type: none">https://arxiv.org/pdf/1908.10084v1.pdfhttps://github.com/UKPLab/sentence-transformershttps://aclanthology.org/D19-1410.pdf				
	id	id-7904604577476150538	id	id8510547945187807396				
	abstract		abstract	BERT (Devlin et al., 2018) and RoBERTa (Liu et al., 2019) has set a new state-of-the-art performance on sentence-pair regression tasks like semantic textual similarity (STS). However, it requires that both sentences are fed into the network, which causes a massive computational overhead: Finding the most similar pair in a collection of 10,000 sentences requires about 50 million inference computations (~65 hours) with BERT. The construction of BERT makes it unsuitable for semantic similarity search as well as for unsupervised tasks like clustering. In this publication, we present Sentence-BERT (SBERT), a modification of the pretrained BERT network that use siamese and triplet network structures to derive semantically meaningful sentence embeddings that can be compared using cosine-similarity. This reduces the effort for finding the most similar pair from 65 hours with BERT / RoBERTa to about 5 seconds with SBERT, while maintaining the accuracy from BERT. We evaluate SBERT and SRoBERTa on common STS tasks and transfer learning tasks, where it outperforms other state-of-the-art sentence embeddings methods.				
	versions		versions					