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* Paraphrase Data

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on

GitHub](<https://github.com/UKPLab/sentence-transformers/blob/master/examples/training/paraphrases/README.md>)

* * *

Paraphrase Data

In our paper [Making Monolingual Sentence Embeddings Multilingual using Knowledge Distillation](<https://arxiv.org/abs/2004.09813>), we showed that paraphrase data together with

[`MultipleNegativesRankingLoss`]([../././docs/package_reference/sentence_transformer/losses.html](https://github.com/UKPLab/sentence-transformers/blob/master/docs/package_reference/sentence_transformer/losses.html)

`#sentence_transformers.losses.MultipleNegativesRankingLoss`

"`sentence_transformers.losses.MultipleNegativesRankingLoss`") is a powerful

combination to learn sentence embeddings models. Read [NLI >

`MultipleNegativesRankingLoss`]([../nli/README.html#multiplenegativesrankingloss](https://github.com/UKPLab/sentence-transformers/blob/master/nli/README.html#multiplenegativesrankingloss))

for more information on this loss function.

The [training.py]([https://github.com/UKPLab/sentence-](https://github.com/UKPLab/sentence-transformers/blob/master/examples/training/paraphrases/training.py)

[transformers/tree/master/examples/training/paraphrases/training.py](https://github.com/UKPLab/sentence-transformers/blob/master/examples/training/paraphrases/training.py)) script

loads various datasets from the [Dataset

Overview]([../././docs/sentence_transformer/dataset_overview.html#pre-](https://github.com/UKPLab/sentence-transformers/blob/master/docs/sentence_transformer/dataset_overview.html#pre-existing-datasets)

[existing-datasets](https://github.com/UKPLab/sentence-transformers/blob/master/docs/sentence_transformer/dataset_overview.html#pre-existing-datasets)). We construct batches by sampling examples from the

respective dataset. So far, examples are not mixed between the datasets, i.e.,

a batch consists only of examples from a single dataset.

As the dataset sizes are quite different in size, we perform [round-robin sampling](../../docs/package_reference/sentence_transformer/sampler.html#sentence_transformer.s.training_args.MultiDatasetBatchSamplers) to train using the same amount of batches from each dataset.

Pre-Trained Models

Have a look at [pre-trained models](../../docs/sentence_transformer/pretrained_models.html) to view all models that were trained on these paraphrase datasets.

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[paraphrase-MiniLM-L12-v2](https://huggingface.co/sentence-transformers/paraphrase-MiniLM-L12-v2) \- Trained on the following datasets: AllNLI, sentence-compression, SimpleWiki, altlex, msmarco-triplets, quora_duplicates, coco_captions, flickr30k_captions, yahoo_answers_title_question, S2ORC_citation_pairs, stackexchange_duplicate_questions, wiki-atomic-edits

*

[paraphrase-distilroberta-base-v2](https://huggingface.co/sentence-transformers/paraphrase-distilroberta-base-v2) \- Trained on the following datasets: AllNLI, sentence-compression, SimpleWiki, altlex, msmarco-triplets, quora_duplicates, coco_captions, flickr30k_captions, yahoo_answers_title_question, S2ORC_citation_pairs, stackexchange_duplicate_questions, wiki-atomic-edits

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[paraphrase-distilroberta-base-v1](https://huggingface.co/sentence-transformers/paraphrase-distilroberta-base-v1)

berta-base-v1) \- Trained on the following datasets: AllNLI, sentence-compression, SimpleWiki, altlex, quora_duplicates, wiki-atomic-edits, wiki-split

*

[paraphrase-xlm-r-multilingual-v1](https://huggingface.co/sentence-transformers/paraphrase-xlm-r-multilingual-v1) \- Multilingual version of paraphrase-distilroberta-base-v1, trained on parallel data for 50+ languages. (Teacher:

[paraphrase-distilroberta-base-v1](https://huggingface.co/sentence-transformers/paraphrase-distilroberta-base-v1), Student: [xlm-r-base](https://huggingface.co/FacebookAI/xlm-roberta-base))

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