[![Logo](../../../_static/logo.png)](../../../index.html)

Getting Started

* [Installation](../../../docs/installation.html)
  * [Install with pip](../../../docs/installation.html#install-with-pip)
  * [Install with Conda](../../../docs/installation.html#install-with-conda)
  * [Install from Source](../../../docs/installation.html#install-from-source)
  * [Editable Install](../../../docs/installation.html#editable-install)
  * [Install PyTorch with CUDA support](../../../docs/installation.html#install-pytorch-with-cuda-support)
* [Quickstart](../../../docs/quickstart.html)
  * [Sentence Transformer](../../../docs/quickstart.html#sentence-transformer)
  * [Cross Encoder](../../../docs/quickstart.html#cross-encoder)
  * [Next Steps](../../../docs/quickstart.html#next-steps)

Sentence Transformer

* [Usage](../../../docs/sentence_transformer/usage/usage.html)
  * [Computing Embeddings](../computing-embeddings/README.html)
    * [Initializing a Sentence Transformer Model](../computing-embeddings/README.html#initializing-a-sentence-transformer-model)
    * [Calculating Embeddings](../computing-embeddings/README.html#calculating-embeddings)
    * [Prompt Templates](../computing-embeddings/README.html#prompt-templates)
    * [Input Sequence Length](../computing-embeddings/README.html#id1)
    * [Multi-Process / Multi-GPU Encoding](../computing-embeddings/README.html#multi-process-multi-gpu-encoding)

* [Semantic Textual Similarity](../../../docs/sentence_transformer/usage/semantic_textual_similarity.html)
* [Similarity Calculation](../../../docs/sentence_transformer/usage/semantic_textual_similarity.html#similarity-calculation)
* [Semantic Search](../semantic-search/README.html)
* [Background](../semantic-search/README.html#background)
* [Symmetric vs. Asymmetric Semantic Search](../semantic-search/README.html#symmetric-vs-asymmetric-semantic-search)
* [Manual Implementation](../semantic-search/README.html#manual-implementation)
* [Optimized Implementation](../semantic-search/README.html#optimized-implementation)
* [Speed Optimization](../semantic-search/README.html#speed-optimization)
* [Elasticsearch](../semantic-search/README.html#elasticsearch)
* [Approximate Nearest Neighbor](../semantic-search/README.html#approximate-nearest-neighbor)
* [Retrieve & Re-Rank](../semantic-search/README.html#retrieve-re-rank)
* [Examples](../semantic-search/README.html#examples)
* [Retrieve & Re-Rank](../retrieve_rerank/README.html)
* [Retrieve & Re-Rank Pipeline](../retrieve_rerank/README.html#retrieve-re-rank-pipeline)
* [Retrieval: Bi-Encoder](../retrieve_rerank/README.html#retrieval-bi-encoder)
* [Re-Ranker: Cross-Encoder](../retrieve_rerank/README.html#re-ranker-cross-encoder)
* [Example Scripts](../retrieve_rerank/README.html#example-scripts)
* [Pre-trained Bi-Encoders (Retrieval)](../retrieve_rerank/README.html#pre-trained-bi-encoders-retrieval)
* [Pre-trained Cross-Encoders (Re-Ranker)](../retrieve_rerank/README.html#pre-trained-cross-encoders-re-ranker)
* [Clustering](../clustering/README.html)

    * [k-Means](../clustering/README.html#k-means)
    * [Agglomerative Clustering](../clustering/README.html#agglomerative-clustering)
    * [Fast Clustering](../clustering/README.html#fast-clustering)
    * [Topic Modeling](../clustering/README.html#topic-modeling)
  * [Paraphrase Mining](../paraphrase-mining/README.html)
    * [`paraphrase_mining()`](../paraphrase-mining/README.html#sentence_transformers.util.paraphrase_mining)
  * [Translated Sentence Mining](../parallel-sentence-mining/README.html)
    * [Margin Based Mining](../parallel-sentence-mining/README.html#margin-based-mining)
    * [Examples](../parallel-sentence-mining/README.html#examples)
  * Image Search
    * Installation
    * Usage
    * Examples
  * [Embedding Quantization](../embedding-quantization/README.html)
    * [Binary Quantization](../embedding-quantization/README.html#binary-quantization)
    * [Scalar (int8) Quantization](../embedding-quantization/README.html#scalar-int8-quantization)
    * [Additional extensions](../embedding-quantization/README.html#additional-extensions)
    * [Demo](../embedding-quantization/README.html#demo)
    * [Try it yourself](../embedding-quantization/README.html#try-it-yourself)
  * [Speeding up Inference](../../../docs/sentence_transformer/usage/efficiency.html)
    * [PyTorch](../../../docs/sentence_transformer/usage/efficiency.html#pytorch)
    * [ONNX](../../../docs/sentence_transformer/usage/efficiency.html#onnx)
    * [OpenVINO](../../../docs/sentence_transformer/usage/efficiency.html#openvino)
    * [Benchmarks](../../../docs/sentence_transformer/usage/efficiency.html#benchmarks)
  * [Creating Custom Models](../../../docs/sentence_transformer/usage/custom_models.html)

* [Structure of Sentence Transformer Models](../../../docs/sentence_transformer/usage/custom_models.html#structure-of-sentence-transformer-models)
* [Sentence Transformer Model from a Transformers Model](../../../docs/sentence_transformer/usage/custom_models.html#sentence-transformer-model-from-a-transformers-model)
* [Pretrained Models](../../../docs/sentence_transformer/pretrained_models.html)
* [Original Models](../../../docs/sentence_transformer/pretrained_models.html#original-models)
* [Semantic Search Models](../../../docs/sentence_transformer/pretrained_models.html#semantic-search-models)
* [Multi-QA Models](../../../docs/sentence_transformer/pretrained_models.html#multi-qa-models)
* [MSMARCO Passage Models](../../../docs/sentence_transformer/pretrained_models.html#msmarco-passage-models)
* [Multilingual Models](../../../docs/sentence_transformer/pretrained_models.html#multilingual-models)
* [Semantic Similarity Models](../../../docs/sentence_transformer/pretrained_models.html#semantic-similarity-models)
* [Bitext Mining](../../../docs/sentence_transformer/pretrained_models.html#bitext-mining)
* [Image & Text-Models](../../../docs/sentence_transformer/pretrained_models.html#image-text-models)
* [INSTRUCTOR models](../../../docs/sentence_transformer/pretrained_models.html#instructor-models)
* [Scientific Similarity Models](../../../docs/sentence_transformer/pretrained_models.html#scientific-similarity-models)
* [Training Overview](../../../docs/sentence_transformer/training_overview.html)
* [Why Finetune?](../../../docs/sentence_transformer/training_overview.html#why-finetune)
* [Training

Components](../../../docs/sentence_transformer/training_overview.html#training-components)

* [Dataset](../../../docs/sentence_transformer/training_overview.html#dataset)

* [Dataset Format](../../../docs/sentence_transformer/training_overview.html#dataset-format)

* [Loss Function](../../../docs/sentence_transformer/training_overview.html#loss-function)

* [Training Arguments](../../../docs/sentence_transformer/training_overview.html#training-arguments)

* [Evaluator](../../../docs/sentence_transformer/training_overview.html#evaluator)

* [Trainer](../../../docs/sentence_transformer/training_overview.html#trainer)

* [Callbacks](../../../docs/sentence_transformer/training_overview.html#callbacks)

* [Multi-Dataset Training](../../../docs/sentence_transformer/training_overview.html#multi-dataset-training)

* [Deprecated Training](../../../docs/sentence_transformer/training_overview.html#deprecated-training)

* [Best Base Embedding Models](../../../docs/sentence_transformer/training_overview.html#best-base-embedding-models)

* [Dataset Overview](../../../docs/sentence_transformer/dataset_overview.html)

* [Datasets on the Hugging Face Hub](../../../docs/sentence_transformer/dataset_overview.html#datasets-on-the-hugging-face-hub)

* [Pre-existing Datasets](../../../docs/sentence_transformer/dataset_overview.html#pre-existing-datasets)

* [Loss Overview](../../../docs/sentence_transformer/loss_overview.html)

* [Loss modifiers](../../../docs/sentence_transformer/loss_overview.html#loss-modifiers)

* [Distillation](../../../docs/sentence_transformer/loss_overview.html#distillation)

* [Commonly used Loss Functions](../../../docs/sentence_transformer/loss_overview.html#commonly-used-loss-functions)

* [Custom Loss Functions](../../../docs/sentence_transformer/loss_overview.html#custom-loss-functions)

* [Training Examples](../../../docs/sentence_transformer/training/examples.html)
  * [Semantic Textual Similarity](../../training/sts/README.html)
    * [Training data](../../training/sts/README.html#training-data)
    * [Loss Function](../../training/sts/README.html#loss-function)
  * [Natural Language Inference](../../training/nli/README.html)
    * [Data](../../training/nli/README.html#data)
    * [SoftmaxLoss](../../training/nli/README.html#softmaxloss)
    * [MultipleNegativesRankingLoss](../../training/nli/README.html#multiplenegativesrankingloss)
  * [Paraphrase Data](../../training/paraphrases/README.html)
    * [Pre-Trained Models](../../training/paraphrases/README.html#pre-trained-models)
  * [Quora Duplicate Questions](../../training/quora_duplicate_questions/README.html)
    * [Training](../../training/quora_duplicate_questions/README.html#training)
    * [MultipleNegativesRankingLoss](../../training/quora_duplicate_questions/README.html#multiplenegativesrankingloss)
    * [Pretrained Models](../../training/quora_duplicate_questions/README.html#pretrained-models)
  * [MS MARCO](../../training/ms_marco/README.html)
    * [Bi-Encoder](../../training/ms_marco/README.html#bi-encoder)
  * [Matryoshka Embeddings](../../training/matryoshka/README.html)
    * [Use Cases](../../training/matryoshka/README.html#use-cases)
    * [Results](../../training/matryoshka/README.html#results)
    * [Training](../../training/matryoshka/README.html#training)
    * [Inference](../../training/matryoshka/README.html#inference)
    * [Code Examples](../../training/matryoshka/README.html#code-examples)
  * [Adaptive Layers](../../training/adaptive_layer/README.html)
    * [Use Cases](../../training/adaptive_layer/README.html#use-cases)
    * [Results](../../training/adaptive_layer/README.html#results)

    * [Training](../../training/adaptive_layer/README.html#training)
    * [Inference](../../training/adaptive_layer/README.html#inference)
    * [Code Examples](../../training/adaptive_layer/README.html#code-examples)
  * [Multilingual Models](../../training/multilingual/README.html)
    * [Extend your own models](../../training/multilingual/README.html#extend-your-own-models)
    * [Training](../../training/multilingual/README.html#training)
    * [Datasets](../../training/multilingual/README.html#datasets)
    * [Sources for Training Data](../../training/multilingual/README.html#sources-for-training-data)
    * [Evaluation](../../training/multilingual/README.html#evaluation)
      * [Available Pre-trained Models](../../training/multilingual/README.html#available-pre-trained-models)
    * [Usage](../../training/multilingual/README.html#usage)
    * [Performance](../../training/multilingual/README.html#performance)
    * [Citation](../../training/multilingual/README.html#citation)
  * [Model Distillation](../../training/distillation/README.html)
    * [Knowledge Distillation](../../training/distillation/README.html#knowledge-distillation)
      * [Speed - Performance Trade-Off](../../training/distillation/README.html#speed-performance-trade-off)
    * [Dimensionality Reduction](../../training/distillation/README.html#dimensionality-reduction)
    * [Quantization](../../training/distillation/README.html#quantization)
  * [Augmented SBERT](../../training/data_augmentation/README.html)
    * [Motivation](../../training/data_augmentation/README.html#motivation)
      * [Extend to your own datasets](../../training/data_augmentation/README.html#extend-to-your-own-datasets)
    * [Methodology](../../training/data_augmentation/README.html#methodology)
      * [Scenario 1: Limited or small annotated datasets (few labeled sentence-pairs)](../../training/data_augmentation/README.html#scenario-1-limited-or-small-annotat

ed-datasets-few-labeled-sentence-pairs)

* [Scenario 2: No annotated datasets (Only unlabeled sentence-pairs)](../../training/data_augmentation/README.html#scenario-2-no-annotated-datasets-only-unlabeled-sentence-pairs)

* [Training](../../training/data_augmentation/README.html#training)

* [Citation](../../training/data_augmentation/README.html#citation)

* [Training with Prompts](../../training/prompts/README.html)

* [What are Prompts?](../../training/prompts/README.html#what-are-prompts)

* [Why would we train with Prompts?](../../training/prompts/README.html#why-would-we-train-with-prompts)

* [How do we train with Prompts?](../../training/prompts/README.html#how-do-we-train-with-prompts)

* [Training with PEFT Adapters](../../training/peft/README.html)

* [Compatibility Methods](../../training/peft/README.html#compatibility-methods)

* [Adding a New Adapter](../../training/peft/README.html#adding-a-new-adapter)

* [Loading a Pretrained Adapter](../../training/peft/README.html#loading-a-pretrained-adapter)

* [Training Script](../../training/peft/README.html#training-script)

* [Unsupervised Learning](../../unsupervised_learning/README.html)

* [TSDAE](../../unsupervised_learning/README.html#tsdae)

* [SimCSE](../../unsupervised_learning/README.html#simcse)

* [CT](../../unsupervised_learning/README.html#ct)

* [CT (In-Batch Negative Sampling)](../../unsupervised_learning/README.html#ct-in-batch-negative-sampling)

* [Masked Language Model (MLM)](../../unsupervised_learning/README.html#masked-language-model-mlm)

* [GenQ](../../unsupervised_learning/README.html#genq)

* [GPL](../../unsupervised_learning/README.html#gpl)

* [Performance Comparison](../../unsupervised_learning/README.html#performance-comparison)
* [Domain Adaptation](../../domain_adaptation/README.html)
* [Domain Adaptation vs. Unsupervised Learning](../../domain_adaptation/README.html#domain-adaptation-vs-unsupervised-learning)
* [Adaptive Pre-Training](../../domain_adaptation/README.html#adaptive-pre-training)
* [GPL: Generative Pseudo-Labeling](../../domain_adaptation/README.html#gpl-generative-pseudo-labeling)
* [Hyperparameter Optimization](../../training/hpo/README.html)
* [HPO Components](../../training/hpo/README.html#hpo-components)
* [Putting It All Together](../../training/hpo/README.html#putting-it-all-together)
* [Example Scripts](../../training/hpo/README.html#example-scripts)
* [Distributed Training](../../../docs/sentence_transformer/training/distributed.html)
* [Comparison](../../../docs/sentence_transformer/training/distributed.html#comparison)
* [FSDP](../../../docs/sentence_transformer/training/distributed.html#fsdp)

Cross Encoder

* [Usage](../../../docs/cross_encoder/usage/usage.html)
* [Retrieve & Re-Rank](../retrieve_rerank/README.html)
* [Retrieve & Re-Rank Pipeline](../retrieve_rerank/README.html#retrieve-re-rank-pipeline)
* [Retrieval: Bi-Encoder](../retrieve_rerank/README.html#retrieval-bi-encoder)
* [Re-Ranker: Cross-Encoder](../retrieve_rerank/README.html#re-ranker-cross-encoder)
* [Example Scripts](../retrieve_rerank/README.html#example-scripts)
* [Pre-trained Bi-Encoders (Retrieval)](../retrieve_rerank/README.html#pre-trained-bi-encoders-retrieval)
* [Pre-trained Cross-Encoders

(Re-Ranker)](../retrieve_rerank/README.html#pre-trained-cross-encoders-re-ranker)

* [Pretrained Models](../../../docs/cross_encoder/pretrained_models.html)

* [MS MARCO](../../../docs/cross_encoder/pretrained_models.html#ms-marco)

* [SQuAD (QNLI)](../../../docs/cross_encoder/pretrained_models.html#squad-qnli)

* [STSbenchmark](../../../docs/cross_encoder/pretrained_models.html#stsbenchmark)

* [Quora Duplicate Questions](../../../docs/cross_encoder/pretrained_models.html#quora-duplicate-questions)

* [NLI](../../../docs/cross_encoder/pretrained_models.html#nli)

* [Community Models](../../../docs/cross_encoder/pretrained_models.html#community-models)

* [Training Overview](../../../docs/cross_encoder/training_overview.html)

* [Training Examples](../../../docs/cross_encoder/training/examples.html)

* [MS MARCO](../../training/ms_marco/cross_encoder_README.html)

* [Cross-Encoder](../../training/ms_marco/cross_encoder_README.html#cross-encoder)

* [Cross-Encoder Knowledge Distillation](../../training/ms_marco/cross_encoder_README.html#cross-encoder-knowledge-distillation)

Package Reference

* [Sentence Transformer](../../../docs/package_reference/sentence_transformer/index.html)

* [SentenceTransformer](../../../docs/package_reference/sentence_transformer/SentenceTransformer.html)

* [SentenceTransformer](../../../docs/package_reference/sentence_transformer/SentenceTransformer.html#id1)

*

[SentenceTransformerModelCardData](../../../docs/package_reference/sentence_transformer/SentenceTransformer.html#sentencetransformermodelcarddata)

*

[SimilarityFunction](../../../docs/package_reference/sentence_transformer/SentenceTransformer.html#similarityfunction)

* [Trainer](../../../docs/package_reference/sentence_transformer/trainer.html)

*

[SentenceTransformerTrainer](../../../docs/package_reference/sentence_transformer/trainer.html#sentencetransformertrainer)

* [Training Arguments](../../../docs/package_reference/sentence_transformer/training_args.html)

*

[SentenceTransformerTrainingArguments](../../../docs/package_reference/sentence_transformer/training_args.html#sentencetransformertrainingarguments)

* [Losses](../../../docs/package_reference/sentence_transformer/losses.html)

*

[BatchAllTripletLoss](../../../docs/package_reference/sentence_transformer/losses.html#batchalltripletloss)

*

[BatchHardSoftMarginTripletLoss](../../../docs/package_reference/sentence_transformer/losses.html#batchhardsoftmargintripletloss)

*

[BatchHardTripletLoss](../../../docs/package_reference/sentence_transformer/losses.html#batchhardtripletloss)

*

[BatchSemiHardTripletLoss](../../../docs/package_reference/sentence_transformer/losses.html#batchsemihardtripletloss)

*

[ContrastiveLoss](../../../docs/package_reference/sentence_transformer/losses.html#contrastiveloss)

*

[OnlineContrastiveLoss](../../../docs/package_reference/sentence_transformer/losses.html#onlinecontrastiveloss)

*

[ContrastiveTensionLoss](../../../docs/package_reference/sentence_transformer/losses.html#contrastivetensionloss)

*

[ContrastiveTensionLossInBatchNegatives](../../../docs/package_reference/sentence_transformer/losses.html#contrastivetensionlossinbatchnegatives)

    * [CoSENTLoss](../../../docs/package_reference/sentence_transformer/losses.html#cosentloss)

    * [AnglELoss](../../../docs/package_reference/sentence_transformer/losses.html#angleloss)

*

[CosineSimilarityLoss](../../../docs/package_reference/sentence_transformer/losses.html#cosinesimilarityloss)

*

[DenoisingAutoEncoderLoss](../../../docs/package_reference/sentence_transformer/losses.html#denoisingautoencoderloss)

*

[GISTEmbedLoss](../../../docs/package_reference/sentence_transformer/losses.html#gistembedloss)

*

[CachedGISTEmbedLoss](../../../docs/package_reference/sentence_transformer/losses.html#cachedgistembedloss)

    * [MSELoss](../../../docs/package_reference/sentence_transformer/losses.html#mseloss)

*

[MarginMSELoss](../../../docs/package_reference/sentence_transformer/losses.html#marginmseloss

)

*

[MatryoshkaLoss](../../../docs/package_reference/sentence_transformer/losses.html#matryoshkaloss

)

*

[Matryoshka2dLoss](../../../docs/package_reference/sentence_transformer/losses.html#matryoshka2dloss)

*

[AdaptiveLayerLoss](../../../docs/package_reference/sentence_transformer/losses.html#adaptivelayerloss)

*

[MegaBatchMarginLoss](../../../docs/package_reference/sentence_transformer/losses.html#megabatchmarginloss)

*

[MultipleNegativesRankingLoss](../../../docs/package_reference/sentence_transformer/losses.html#multiplenegativesrankingloss)

*

[CachedMultipleNegativesRankingLoss](../../../docs/package_reference/sentence_transformer/losses.html#cachedmultiplenegativesrankingloss)

*

[MultipleNegativesSymmetricRankingLoss](../../../docs/package_reference/sentence_transformer/losses.html#multiplenegativessymmetricrankingloss)

*

[CachedMultipleNegativesSymmetricRankingLoss](../../../docs/package_reference/sentence_transformer/losses.html#cachedmultiplenegativessymmetricrankingloss)

* [SoftmaxLoss](../../../docs/package_reference/sentence_transformer/losses.html#softmaxloss)

* [TripletLoss](../../../docs/package_reference/sentence_transformer/losses.html#tripletloss)

    * [Samplers](../../../docs/package_reference/sentence_transformer/sampler.html)
        * [BatchSamplers](../../../docs/package_reference/sentence_transformer/sampler.html#batchsamplers)
        * [MultiDatasetBatchSamplers](../../../docs/package_reference/sentence_transformer/sampler.html#multidatasetbatchsamplers)
    * [Evaluation](../../../docs/package_reference/sentence_transformer/evaluation.html)
        * [BinaryClassificationEvaluator](../../../docs/package_reference/sentence_transformer/evaluation.html#binaryclassificationevaluator)
        * [EmbeddingSimilarityEvaluator](../../../docs/package_reference/sentence_transformer/evaluation.html#embeddingsimilarityevaluator)
        * [InformationRetrievalEvaluator](../../../docs/package_reference/sentence_transformer/evaluation.html#informationretrievalevaluator)
        * [NanoBEIREvaluator](../../../docs/package_reference/sentence_transformer/evaluation.html#nanobeirevaluator)
        * [MSEEvaluator](../../../docs/package_reference/sentence_transformer/evaluation.html#mseevaluator)
        * [ParaphraseMiningEvaluator](../../../docs/package_reference/sentence_transformer/evaluation.html#paraphraseminingevaluator)
        *

[RerankingEvaluator](../../../docs/package_reference/sentence_transformer/evaluation.html#rerankingevaluator)
*
[SentenceEvaluator](../../../docs/package_reference/sentence_transformer/evaluation.html#sentenceevaluator)
*
[SequentialEvaluator](../../../docs/package_reference/sentence_transformer/evaluation.html#sequentialevaluator)
*
[TranslationEvaluator](../../../docs/package_reference/sentence_transformer/evaluation.html#translationevaluator)
*
[TripletEvaluator](../../../docs/package_reference/sentence_transformer/evaluation.html#tripletevaluator)
    * [Datasets](../../../docs/package_reference/sentence_transformer/datasets.html)
*
[ParallelSentencesDataset](../../../docs/package_reference/sentence_transformer/datasets.html#parallelsentencesdataset)
*
[SentenceLabelDataset](../../../docs/package_reference/sentence_transformer/datasets.html#sentencelabeldataset)
*
[DenoisingAutoEncoderDataset](../../../docs/package_reference/sentence_transformer/datasets.html#denoisingautoencoderdataset)
*
[NoDuplicatesDataLoader](../../../docs/package_reference/sentence_transformer/datasets.html#noduplicatesdataloader)

* [Models](../../../docs/package_reference/sentence_transformer/models.html)
* [Main Classes](../../../docs/package_reference/sentence_transformer/models.html#main-classes)
* [Further Classes](../../../docs/package_reference/sentence_transformer/models.html#further-classes)
* [quantization](../../../docs/package_reference/sentence_transformer/quantization.html)
* [`quantize_embeddings()`](../../../docs/package_reference/sentence_transformer/quantization.html#sentence_transformers.quantization.quantize_embeddings)
* [`semantic_search_faiss()`](../../../docs/package_reference/sentence_transformer/quantization.html#sentence_transformers.quantization.semantic_search_faiss)
* [`semantic_search_usearch()`](../../../docs/package_reference/sentence_transformer/quantization.html#sentence_transformers.quantization.semantic_search_usearch)
* [Cross Encoder](../../../docs/package_reference/cross_encoder/index.html)
* [CrossEncoder](../../../docs/package_reference/cross_encoder/cross_encoder.html)
* [CrossEncoder](../../../docs/package_reference/cross_encoder/cross_encoder.html#id1)
* [Training Inputs](../../../docs/package_reference/cross_encoder/cross_encoder.html#training-inputs)
* [Evaluation](../../../docs/package_reference/cross_encoder/evaluation.html)
* [CEBinaryAccuracyEvaluator](../../../docs/package_reference/cross_encoder/evaluation.html#cebinaryaccuracyevaluator)
* [CEBinaryClassificationEvaluator](../../../docs/package_reference/cross_encoder/evaluation.html#cebinaryclassificationevaluator)

*
[CECorrelationEvaluator](../../../docs/package_reference/cross_encoder/evaluation.html#cecorrelationevaluator)
  * [CEF1Evaluator](../../../docs/package_reference/cross_encoder/evaluation.html#cef1evaluator)
*
[CESoftmaxAccuracyEvaluator](../../../docs/package_reference/cross_encoder/evaluation.html#cesoftmaxaccuracyevaluator)
*
[CERerankingEvaluator](../../../docs/package_reference/cross_encoder/evaluation.html#cererankingevaluator)
* [util](../../../docs/package_reference/util.html)
  * [Helper Functions](../../../docs/package_reference/util.html#module-sentence_transformers.util)
*
[`community_detection()`](../../../docs/package_reference/util.html#sentence_transformers.util.community_detection)
  * [`http_get()`](../../../docs/package_reference/util.html#sentence_transformers.util.http_get)
*
[`is_training_available()`](../../../docs/package_reference/util.html#sentence_transformers.util.is_training_available)
*
[`mine_hard_negatives()`](../../../docs/package_reference/util.html#sentence_transformers.util.mine_hard_negatives)
*
[`normalize_embeddings()`](../../../docs/package_reference/util.html#sentence_transformers.util.normalize_embeddings)
*
[`paraphrase_mining()`](../../../docs/package_reference/util.html#sentence_transformers.util.paraphr

ase_mining)

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[`semantic_search()`](../../../docs/package_reference/util.html#sentence_transformers.util.semantic_search)

*

[`truncate_embeddings()`](../../../docs/package_reference/util.html#sentence_transformers.util.truncate_embeddings)

* [Model Optimization](../../../docs/package_reference/util.html#module-sentence_transformers.backend)

*

[`export_dynamic_quantized_onnx_model()`](../../../docs/package_reference/util.html#sentence_transformers.backend.export_dynamic_quantized_onnx_model)

*

[`export_optimized_onnx_model()`](../../../docs/package_reference/util.html#sentence_transformers.backend.export_optimized_onnx_model)

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[`export_static_quantized_openvino_model()`](../../../docs/package_reference/util.html#sentence_transformers.backend.export_static_quantized_openvino_model)

* [Similarity Metrics](../../../docs/package_reference/util.html#module-sentence_transformers.util)

* [`cos_sim()`](../../../docs/package_reference/util.html#sentence_transformers.util.cos_sim)

* [`dot_score()`](../../../docs/package_reference/util.html#sentence_transformers.util.dot_score)

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[`euclidean_sim()`](../../../docs/package_reference/util.html#sentence_transformers.util.euclidean_sim)

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[`manhattan_sim()`](../../../docs/package_reference/util.html#sentence_transformers.util.manhattan_sim)

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[`pairwise_cos_sim()`](../../../docs/package_reference/util.html#sentence_transformers.util.pairwise_cos_sim)

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[`pairwise_dot_score()`](../../../docs/package_reference/util.html#sentence_transformers.util.pairwise_dot_score)

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[`pairwise_euclidean_sim()`](../../../docs/package_reference/util.html#sentence_transformers.util.pairwise_euclidean_sim)

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[`pairwise_manhattan_sim()`](../../../docs/package_reference/util.html#sentence_transformers.util.pairwise_manhattan_sim)

__[Sentence Transformers](../../../index.html)

  * [](../../../index.html)
  * [Usage](../../../docs/sentence_transformer/usage/usage.html)
  * Image Search

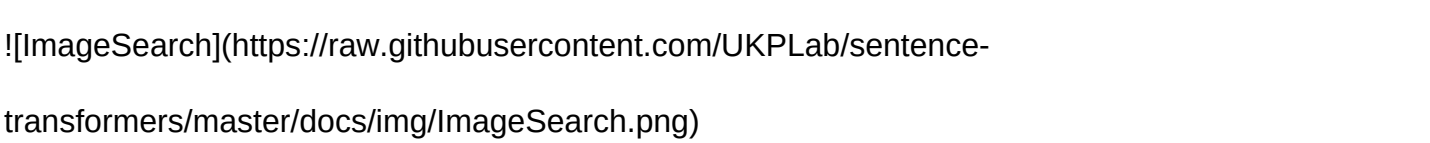
* [Edit on GitHub](https://github.com/UKPLab/sentence-transformers/blob/master/examples/applications/image-search/README.md)

* * *

Image Searchïƒ•

SentenceTransformers provides models that allow to embed images and text into

the same vector space. This allows to find similar images as well as to implement **image search**.



Installationïƒ•

Ensure that you have [transformers](https://pypi.org/project/transformers/) installed to use the image-text-models and use a recent PyTorch version (tested with PyTorch 1.7.0). Image-Text-Models have been added with SentenceTransformers version 1.0.0. Image-Text-Models are still in an experimental phase.

Usageïƒ•

SentenceTransformers provides a wrapper for the [OpenAI CLIP Model](https://github.com/openai/CLIP), which was trained on a variety of (image, text)-pairs.

```
from sentence_transformers import SentenceTransformer
from PIL import Image

# Load CLIP model
model = SentenceTransformer("clip-ViT-B-32")
```

```
    # Encode an image:
    img_emb = model.encode(Image.open("two_dogs_in_snow.jpg"))

    # Encode text descriptions
    text_emb = model.encode(
        ["Two dogs in the snow", "A cat on a table", "A picture of London at night"]
    )

    # Compute similarities
    similarity_scores = model.similarity(img_emb, text_emb)
    print(similarity_scores)
```

You can use the CLIP model for:

  * Text-to-Image / Image-To-Text / Image-to-Image / Text-to-Text Search

  * You can fine-tune it on your own image&text data with the regular SentenceTransformers training code.

Examplesïƒ•

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[Image_Search.ipynb](https://github.com/UKPLab/sentence-transformers/tree/master/examples/applications/image-search/Image_Search.ipynb) ([Colab Version](https://colab.research.google.com/drive/16OdADinjAg3w3ceZy3-cOR9A-5ZW9BYr?usp=sh

aring)) depicts a larger example for **text-to-image** and **image-to-image** search using 25,000 free pictures from [Unsplash](https://unsplash.com/).

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[Image_Search-multilingual.ipynb](https://github.com/UKPLab/sentence-transformers/tree/master/examples/applications/image-search/Image_Search-multilingual.ipynb) ([Colab Version](https://colab.research.google.com/drive/1N6woBKL4dzYsHboDNqtv-8gjZglKOZcn?usp=sharing)) example of multilingual text2image search for 50+ languages.

*

[Image_Clustering.ipynb](https://github.com/UKPLab/sentence-transformers/tree/master/examples/applications/image-search/Image_Clustering.ipynb) ([Colab Version](https://colab.research.google.com/drive/1T3gfEF7pkXgPPajNa9ZjurB25B0RJ3_X?usp=sharing)) shows how to perform **image clustering**. Given 25,000 free pictures from [Unsplash](https://unsplash.com/), we find clusters of similar images. You can control how sensitive the clustering should be.

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[Image_Duplicates.ipynb](https://github.com/UKPLab/sentence-transformers/tree/master/examples/applications/image-search/Image_Duplicates.ipynb) ([Colab Version](https://colab.research.google.com/drive/1wLiZNedMwlM-FxBVbp3aA353yohV_wJ1?usp=sharing)) shows an example how to find duplicate and near duplicate images in a large collection of photos.

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[Image_Classification.ipynb](https://github.com/UKPLab/sentence-transformers/tree/master/examples/applications/image-search/Image_Classification.ipynb) ([Colab

Version](https://colab.research.google.com/drive/1J0a29kSZ7qJwu2bGqjo1GYRz77v1oWq0?usp=sharing)) example for (multi-lingual) zero-shot image classifcation.

[Previous](../parallel-sentence-mining/README.html "Translated Sentence Mining") [Next](../embedding-quantization/README.html "Embedding Quantization")

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