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

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

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

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

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[`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)

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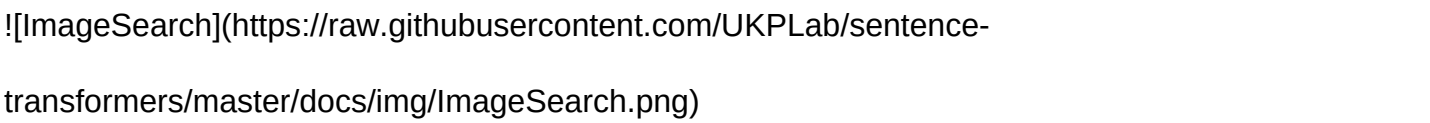
Image Searchïƒ•

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.

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[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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