

```
from transformers import pipeline

image_captioner = pipeline("image-to-text", model = 'Salesforce/blip-image-captioning-large', device=0

→ /usr/local/lib/python3.11/dist-packages/huggingface_hub/utils/_auth.py:94: UserWarning:
  The secret `HF_TOKEN` does not exist in your Colab secrets.
  To authenticate with the Hugging Face Hub, create a token in your settings tab (https://huggingface.co)
  You will be able to reuse this secret in all of your notebooks.
  Please note that authentication is recommended but still optional to access public models or datasets.
  warnings.warn(
config.json: 100%                                         4.60k/4.60k [00:00<00:00, 289kB/s]

model.safetensors: 100%                                     1.88G/1.88G [00:08<00:00, 305MB/s]

tokenizer_config.json: 100%                                 527/527 [00:00<00:00, 61.1kB/s]

vocab.txt: 100%                                         232k/232k [00:00<00:00, 1.43MB/s]

tokenizer.json: 100%                                     711k/711k [00:00<00:00, 2.91MB/s]

special_tokens_map.json: 100%                             125/125 [00:00<00:00, 12.1kB/s]

preprocessor_config.json: 100%                           445/445 [00:00<00:00, 47.8kB/s]

Using a slow image processor as `use_fast` is unset and a slow processor was saved with this model
Device set to use cuda:0
```

```
image = r'/content/download.jpg'
caption = image_captioner(image)
caption[0].get('generated_text')
```

→ 'peacock sitting on a rock in front of a lake with trees'

```
vqa = pipeline('visual-question-answering')
```

→ No model was supplied, defaulted to dandelin/vilt-b32-finetuned-vqa and revision d0a1f6a (<https://huggingface.co/dandelin/vilt-b32-finetuned-vqa/rev/d0a1f6a>)
 Using a pipeline without specifying a model name and revision in production is not recommended.

```
config.json: 100%                                         136k/136k [00:00<00:00, 12.9MB/s]

pytorch_model.bin: 100%                                     470M/470M [00:01<00:00, 291MB/s]

tokenizer_config.json: 100%                               320/320 [00:00<00:00, 35.2kB/s]

model.safetensors: 100%                                     470M/470M [00:02<00:00, 208MB/s]

vocab.txt: 100%                                         232k/232k [00:00<00:00, 1.36MB/s]

tokenizer.json: 100%                                     466k/466k [00:00<00:00, 5.20MB/s]

special_tokens_map.json: 100%                           112/112 [00:00<00:00, 4.17kB/s]

preprocessor_config.json: 100%                           251/251 [00:00<00:00, 12.4kB/s]

Device set to use cuda:0
```

```
image =r'/content/download.jpg'
```

```
q = input('Ask a question about the image: ')
result = vqa(image, q)
result
```

```
→ Ask a question about the image: what is the bird
[{'score': 0.972900390625, 'answer': 'peacock'},
 {'score': 0.07045653462409973, 'answer': 'swan'},
 {'score': 0.01860669255256653, 'answer': 'parrot'},
 {'score': 0.017449375241994858, 'answer': 'green'},
 {'score': 0.015766657888889313, 'answer': 'pigeon'}]
```

```
!pip install diffusers
import torch
from diffusers import DiffusionPipeline

generator = DiffusionPipeline.from_pretrained("runwayml/stable-diffusion-v1-5")
generator.to("cuda")
```

```
Requirement already satisfied: diffusers in /usr/local/lib/python3.11/dist-packages (0.33.1)
Requirement already satisfied: importlib-metadata in /usr/local/lib/python3.11/dist-packages (from
Requirement already satisfied: filelock in /usr/local/lib/python3.11/dist-packages (from diffusers)
Requirement already satisfied: huggingface-hub>=0.27.0 in /usr/local/lib/python3.11/dist-packages
Requirement already satisfied: numpy in /usr/local/lib/python3.11/dist-packages (from diffusers) (
Requirement already satisfied: regex!=2019.12.17 in /usr/local/lib/python3.11/dist-packages (from
Requirement already satisfied: requests in /usr/local/lib/python3.11/dist-packages (from diffusers)
Requirement already satisfied: safetensors>=0.3.1 in /usr/local/lib/python3.11/dist-packages (from
Requirement already satisfied: Pillow in /usr/local/lib/python3.11/dist-packages (from diffusers)
Requirement already satisfied: fsspec>=2023.5.0 in /usr/local/lib/python3.11/dist-packages (from h
Requirement already satisfied: packaging>=20.9 in /usr/local/lib/python3.11/dist-packages (from hu
Requirement already satisfied: pyyaml>=5.1 in /usr/local/lib/python3.11/dist-packages (from huggin
Requirement already satisfied: tqdm>=4.42.1 in /usr/local/lib/python3.11/dist-packages (from huggi
Requirement already satisfied: typing-extensions>=3.7.4.3 in /usr/local/lib/python3.11/dist-packag
Requirement already satisfied: zipp>=3.20 in /usr/local/lib/python3.11/dist-packages (from importl
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.11/dist-packages
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.11/dist-packages (from reque
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.11/dist-packages (from
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.11/dist-packages (from
```

Loading pipeline components...: 100%

7/7 [00:01<00:00, 3.01it/s]

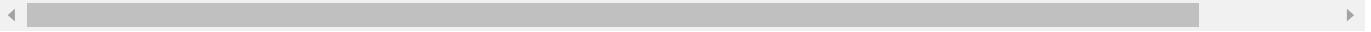
```
StableDiffusionPipeline {
    "_class_name": "StableDiffusionPipeline",
    "_diffusers_version": "0.33.1",
    "_name_or_path": "runwayml/stable-diffusion-v1-5",
    "feature_extractor": [
        "transformers",
        "CLIPImageProcessor"
    ],
    "image_encoder": [
        null,
        null
    ],
    "requires_safety_checker": true,
    "safety_checker": [
        "stable_diffusion",
        "StableDiffusionSafetyChecker"
    ],
    "scheduler": [
        "diffusers",
        "PNDMScheduler"
    ],
    "text_encoder": [
        "transformers",
        "CLIPTextModel"
    ],
    "tokenizer": [
        "transformers",
        "CLIPTokenizer"
    ],
    "unet": [
        "diffusers",
        "UNet2DConditionModel"
    ],
    "vae": [
        "diffusers",
        "AutoencoderKL"
    ]
}
```

```
prompt = input("Enter the prompt: ")  
image = generator(prompt).images[0]  
image
```

→ Enter the prompt: a beautiful stars in the sky

100%

50/50 [00:24<00:00, 2.08it/s]



```
prompt = "A dog breed formed by hybridizing pomeranian and pud"  
image = generator(prompt).images[0]  
image
```

100%

50/50 [00:25<00:00, 2.00it/s]



```
prompt = input("Enter the prompt: ")
image = generator(prompt).images[0]
image
```

→ Enter the prompt: chocolate cake with ice cream

100%

50/50 [00:25<00:00, 1.98it/s]



```
prompt = input("Enter the prompt: ")
image = generator(prompt).images[0]
image
```

→ Enter the prompt: beatutiful roses

100%

50/50 [00:25<00:00, 1.98it/s]



```
prompt = input("Enter the prompt: ")
image = generator(prompt).images[0]
image
```

Enter the prompt: earrings

100%

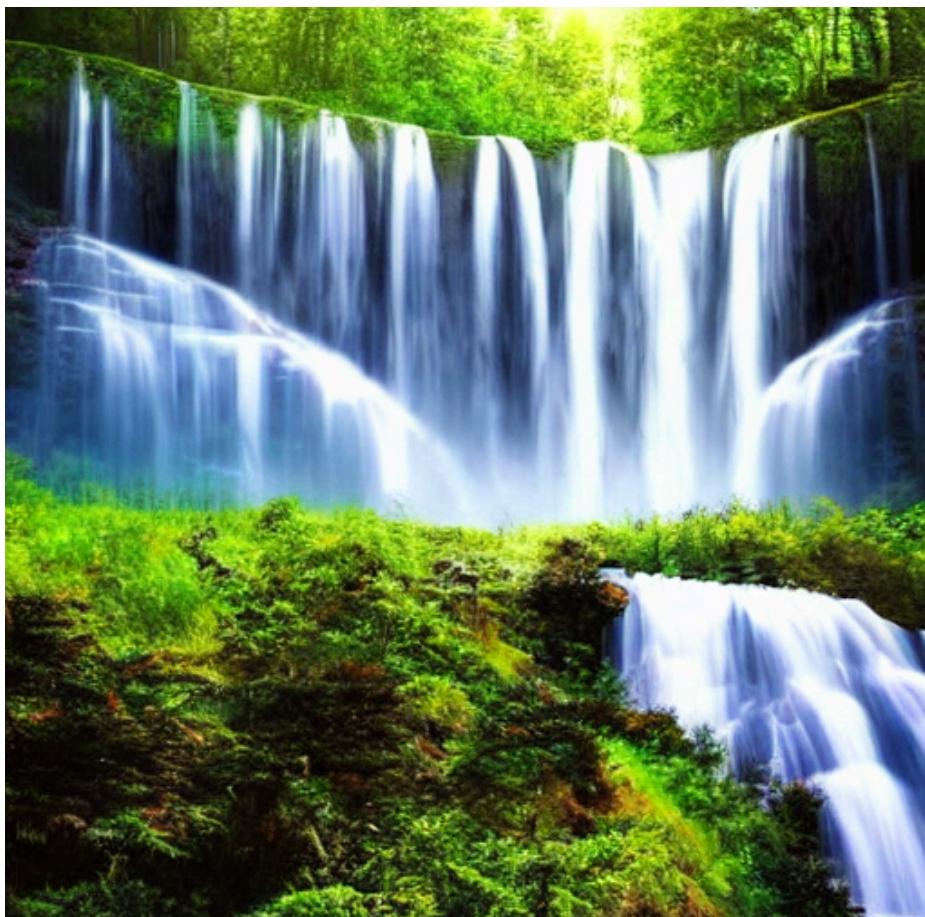
50/50 [00:25<00:00, 1.98it/s]



```
prompt = "give me beautiful forest with mountain hills and water falls"  
image = generator(prompt).images[0]  
image
```

100%

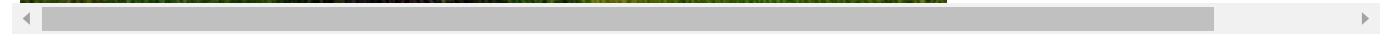
50/50 [00:25<00:00, 1.99it/s]



```
prompt = "a beautifull trees with fruits"
image = generator(prompt).images[0]
image
```

→ 100%

50/50 [00:24<00:00, 2.03it/s]



Start coding or [generate](#) with AI.

```
from transformers import pipeline
image_cls = pipeline('image-classification')
```

→ No model was supplied, defaulted to google/vit-base-patch16-224 and revision 3f49326 (<https://hugge>

Using a pipeline without specifying a model name and revision in production is not recommended.

config.json: 100% 69.7k/69.7k [00:00<00:00, 5.69MB/s]

Xet Storage is enabled for this repo, but the 'hf_xet' package is not installed. Falling back to r

WARNING:huggingface_hub.file_download:Xet Storage is enabled for this repo, but the 'hf_xet' packa
model.safetensors: 100% 346M/346M [00:07<00:00, 46.7MB/s]

preprocessor_config.json: 100% 160/160 [00:00<00:00, 14.8kB/s]

Fast image processor class <class 'transformers.models.vit.image_processing_vit_fast.ViTImageProce
Device set to use cuda:0

```
img="/content/Poodle_1_f8022856-18d7-4862-8df1-f443e414da93_x630.webp"
```

```
r = image_cls(img)
r
```

```
↳ [{"label": "miniature poodle", "score": 0.6937835812568665},  
 {"label": "toy poodle", "score": 0.2971615493297577},  
 {"label": "standard poodle", "score": 0.004254060797393322},  
 {"label": "teddy, teddy bear", "score": 0.0004113837203476578},  
 {"label": "Bedlington terrier", "score": 0.00037043378688395023}]
```

```
det = pipeline('object-detection')
```



```
warnings.warn()  
/usr/local/lib/python3.11/dist-packages/torch/nn/modules/module.py:2397: UserWarning: for layer4.2  
    warnings.warn()  
Some weights of the model checkpoint at facebook/detr-resnet-50 were not used when initializing De  
- This IS expected if you are initializing DetrForObjectDetection from the checkpoint of a model t  
- This IS NOT expected if you are initializing DetrForObjectDetection from the checkpoint of a mod  
preprocessor_config.json: 100%  
Device set to use cuda:0
```

290/290 [00:00<00:00, 5.07kB/s]

```
r = det("/content/car.jpg")  
  
r  
  
[{"score": 0.9120805263519287,  
 "label": "person",  
 "box": {"xmin": 82, "ymin": 59, "xmax": 108, "ymax": 96}},  
 {"score": 0.6759291291236877,  
 "label": "person",  
 "box": {"xmin": 76, "ymin": 59, "xmax": 96, "ymax": 81}},  
 {"score": 0.8024949431419373,  
 "label": "car",  
 "box": {"xmin": 15, "ymin": 31, "xmax": 253, "ymax": 180}},  
 {"score": 0.9904961585998535,  
 "label": "car",  
 "box": {"xmin": 17, "ymin": 44, "xmax": 253, "ymax": 179}}]
```

```
!pip install deepface librosa speechRecognition
```

```
Collecting deepface  
  Downloading deepface-0.0.93-py3-none-any.whl.metadata (30 kB)  
Requirement already satisfied: librosa in /usr/local/lib/python3.11/dist-packages (0.11.0)  
Collecting speechRecognition  
  Downloading speechrecognition-3.14.3-py3-none-any.whl.metadata (30 kB)  
Requirement already satisfied: requests>=2.27.1 in /usr/local/lib/python3.11/dist-packages (from speechRecognition) (2.27.3)  
Requirement already satisfied: numpy>=1.14.0 in /usr/local/lib/python3.11/dist-packages (from speechRecognition) (1.19.5)  
Requirement already satisfied: pandas>=0.23.4 in /usr/local/lib/python3.11/dist-packages (from speechRecognition) (1.4.3)  
Requirement already satisfied: gdown>=3.10.1 in /usr/local/lib/python3.11/dist-packages (from speechRecognition) (3.10.1)  
Requirement already satisfied: tqdm>=4.30.0 in /usr/local/lib/python3.11/dist-packages (from speechRecognition) (4.30.1)  
Requirement already satisfied: Pillow>=5.2.0 in /usr/local/lib/python3.11/dist-packages (from speechRecognition) (8.2.0)  
Requirement already satisfied: opencv-python>=4.5.5.64 in /usr/local/lib/python3.11/dist-packages (from speechRecognition) (4.5.5.64)  
Requirement already satisfied: tensorflow>=1.9.0 in /usr/local/lib/python3.11/dist-packages (from speechRecognition) (2.10.0)  
Requirement already satisfied: keras>=2.2.0 in /usr/local/lib/python3.11/dist-packages (from speechRecognition) (2.10.0)  
Requirement already satisfied: Flask>=1.1.2 in /usr/local/lib/python3.11/dist-packages (from speechRecognition) (2.3.0)  
Collecting flask-cors>=4.0.1 (from deepface)  
  Downloading flask_cors-6.0.0-py3-none-any.whl.metadata (961 bytes)  
Collecting mtcnn>=0.1.0 (from deepface)  
  Downloading mtcnn-1.0.0-py3-none-any.whl.metadata (5.8 kB)  
Collecting retina-face>=0.0.1 (from deepface)  
  Downloading retina_face-0.0.17-py3-none-any.whl.metadata (10 kB)  
Collecting fire>=0.4.0 (from deepface)  
  Downloading fire-0.7.0.tar.gz (87 kB)
```

87.2/87.2 kB 9.1 MB/s eta 0:00:00

```
Preparing metadata (setup.py) ... done  
Collecting gunicorn>=20.1.0 (from deepface)  
  Downloading gunicorn-23.0.0-py3-none-any.whl.metadata (4.4 kB)  
Requirement already satisfied: audioread>=2.1.9 in /usr/local/lib/python3.11/dist-packages (from deepface) (2.3.0)  
Requirement already satisfied: numba>=0.51.0 in /usr/local/lib/python3.11/dist-packages (from deepface) (0.51.2)  
Requirement already satisfied: scipy>=1.6.0 in /usr/local/lib/python3.11/dist-packages (from deepface) (1.9.3)  
Requirement already satisfied: scikit-learn>=1.1.0 in /usr/local/lib/python3.11/dist-packages (from deepface) (1.5.2)  
Requirement already satisfied: joblib>=1.0 in /usr/local/lib/python3.11/dist-packages (from deepface) (1.1.0)  
Requirement already satisfied: decorator>=4.3.0 in /usr/local/lib/python3.11/dist-packages (from deepface) (4.4.2)  
Requirement already satisfied: soundfile>=0.12.1 in /usr/local/lib/python3.11/dist-packages (from deepface) (0.13.1)  
Requirement already satisfied: poodoo>=1.1 in /usr/local/lib/python3.11/dist-packages (from deepface) (1.1.0)  
Requirement already satisfied: soxr>=0.3.2 in /usr/local/lib/python3.11/dist-packages (from deepface) (0.3.2)  
Requirement already satisfied: typing_extensions>=4.1.1 in /usr/local/lib/python3.11/dist-packages (from deepface) (4.3.0)  
Requirement already satisfied: lazy_loader>=0.1 in /usr/local/lib/python3.11/dist-packages (from deepface) (0.1.0)  
Requirement already satisfied: msgpack>=1.0 in /usr/local/lib/python3.11/dist-packages (from deepface) (1.0.2)  
Requirement already satisfied: termcolor in /usr/local/lib/python3.11/dist-packages (from fire>=0.4.0)
```

```
Requirement already satisfied: blinker>=1.9.0 in /usr/local/lib/python3.11/dist-packages (from flask==1.1.2)
Requirement already satisfied: click>=8.1.3 in /usr/local/lib/python3.11/dist-packages (from Flask==1.1.2)
Requirement already satisfied: itsdangerous>=2.2.0 in /usr/local/lib/python3.11/dist-packages (from Flask==1.1.2)
Requirement already satisfied: jinja2>=3.1.2 in /usr/local/lib/python3.11/dist-packages (from Flask==1.1.2)
Requirement already satisfied: markupsafe>=2.1.1 in /usr/local/lib/python3.11/dist-packages (from Flask==1.1.2)
Requirement already satisfied: werkzeug>=3.1.0 in /usr/local/lib/python3.11/dist-packages (from Flask==1.1.2)
Requirement already satisfied: beautifulsoup4 in /usr/local/lib/python3.11/dist-packages (from gdown==1.0.0)
Requirement already satisfied: filelock in /usr/local/lib/python3.11/dist-packages (from gdown==1.0.0)
Requirement already satisfied: packaging in /usr/local/lib/python3.11/dist-packages (from gunicc==1.0.0)
Requirement already satisfied: absl-py in /usr/local/lib/python3.11/dist-packages (from keras>=2.2.0)
Requirement already satisfied: rich in /usr/local/lib/python3.11/dist-packages (from keras>=2.2.0)
Requirement already satisfied: namex in /usr/local/lib/python3.11/dist-packages (from keras>=2.2.0)
Requirement already satisfied: h5py in /usr/local/lib/python3.11/dist-packages (from keras>=2.2.0)
Requirement already satisfied: optree in /usr/local/lib/python3.11/dist-packages (from keras>=2.2.0)
Requirement already satisfied: ml-dtypes in /usr/local/lib/python3.11/dist-packages (from keras>=2.2.0)
Collecting lz4>=4.3.3 (from mtcnn>=0.1.0->deepface)
```

```
from deepface import DeepFace  
import librosa  
import speech_recognition as sr  
import numpy as np
```

```
→ 25-05-22 08:55:32 - Directory /root/.deepface has been created  
→ 25-05-22 08:55:32 - Directory /root/.deepface/weights has been created
```

```
emotions = ['happy', 'sad', 'neutral', 'angry', 'fear', 'surprrise']
```

```
r = DeepFace.analyze(img_path = '/content/pic.jpg', actions = ['emotion'])
r[0]
```

25-05-22 09:11:15 - facial_expression_model_weights.h5 will be downloaded...

Downloading...

```
From: https://github.com/serengil/deepface_models/releases/download/v1.0/facial_expression_model_w
To: /root/.deepface/weights/facial_expression_model_weights.h5
100%|██████████| 5.98M/5.98M [00:00<00:00, 131MB/s]
{'emotion': {'angry': np.float32(0.0016327538),
    'disgust': np.float32(1.9091252e-12),
    'fear': np.float32(0.04947949),
    'happy': np.float32(99.73713),
    'sad': np.float32(0.17470929),
    'surprise': np.float32(4.7272875e-05),
    'neutral': np.float32(0.037005626)},
 'dominant_emotion': 'happy',
 'region': {'x': 209,
    'y': 67,
    'w': 226,
    'h': 226,
    'left_eye': (319, 254),
    'right_eye': (274, 160)},
 'face_confidence': np.float64(0.9)}
```

```
!pip install transformers torch
```

```
Requirement already satisfied: transformers in /usr/local/lib/python3.11/dist-packages (4.51.3)
Requirement already satisfied: torch in /usr/local/lib/python3.11/dist-packages (2.6.0+cu124)
Requirement already satisfied: filelock in /usr/local/lib/python3.11/dist-packages (from transform
Requirement already satisfied: huggingface-hub<1.0,>=0.30.0 in /usr/local/lib/python3.11/dist-pack
Requirement already satisfied: numpy>=1.17 in /usr/local/lib/python3.11/dist-packages (from transf
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.11/dist-packages (from tr
Requirement already satisfied: pyyaml>=5.1 in /usr/local/lib/python3.11/dist-packages (from transf
Requirement already satisfied: regex!=2019.12.17 in /usr/local/lib/python3.11/dist-packages (from
Requirement already satisfied: requests in /usr/local/lib/python3.11/dist-packages (from transform
Requirement already satisfied: tokenizers<0.22,>=0.21 in /usr/local/lib/python3.11/dist-packages (
Requirement already satisfied: safetensors>=0.4.3 in /usr/local/lib/python3.11/dist-packages (from
Requirement already satisfied: tqdm>=4.27 in /usr/local/lib/python3.11/dist-packages (from transfo
Requirement already satisfied: typing-extensions>=4.10.0 in /usr/local/lib/python3.11/dist-package
Requirement already satisfied: networkx in /usr/local/lib/python3.11/dist-packages (from torch) (3
Requirement already satisfied: jinja2 in /usr/local/lib/python3.11/dist-packages (from torch) (3.1
Requirement already satisfied: fsspec in /usr/local/lib/python3.11/dist-packages (from torch) (202
Collecting nvidia-cuda-nvrtc-cu12==12.4.127 (from torch)
  Downloading nvidia_cuda_nvrtc_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl.metadata (1.5 kB)
Collecting nvidia-cuda-runtime-cu12==12.4.127 (from torch)
  Downloading nvidia_cuda_runtime_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl.metadata (1.5 kB)
Collecting nvidia-cuda-cupti-cu12==12.4.127 (from torch)
  Downloading nvidia_cuda_cupti_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl.metadata (1.6 kB)
Collecting nvidia-cudnn-cu12==9.1.0.70 (from torch)
  Downloading nvidia_cudnn_cu12-9.1.0.70-py3-none-manylinux2014_x86_64.whl.metadata (1.6 kB)
Collecting nvidia-cUBLAS-cu12==12.4.5.8 (from torch)
  Downloading nvidia_cUBLAS_cu12-12.4.5.8-py3-none-manylinux2014_x86_64.whl.metadata (1.5 kB)
Collecting nvidia-cufft-cu12==11.2.1.3 (from torch)
  Downloading nvidia_cufft_cu12-11.2.1.3-py3-none-manylinux2014_x86_64.whl.metadata (1.5 kB)
Collecting nvidia-curand-cu12==10.3.5.147 (from torch)
  Downloading nvidia_curand_cu12-10.3.5.147-py3-none-manylinux2014_x86_64.whl.metadata (1.5 kB)
Collecting nvidia-cusolver-cu12==11.6.1.9 (from torch)
  Downloading nvidia_cusolver_cu12-11.6.1.9-py3-none-manylinux2014_x86_64.whl.metadata (1.6 kB)
Collecting nvidia-cusparse-cu12==12.3.1.170 (from torch)
  Downloading nvidia_cusparse_cu12-12.3.1.170-py3-none-manylinux2014_x86_64.whl.metadata (1.6 kB)
Requirement already satisfied: nvidia-cusparseelt-cu12==0.6.2 in /usr/local/lib/python3.11/dist-pac
Requirement already satisfied: nvidia-nccl-cu12==2.21.5 in /usr/local/lib/python3.11/dist-packages
Requirement already satisfied: nvidia-nvtx-cu12==12.4.127 in /usr/local/lib/python3.11/dist-packag
Collecting nvidia-nvjitlink-cu12==12.4.127 (from torch)
  Downloading nvidia_nvjitlink_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl.metadata (1.5 kB)
Requirement already satisfied: triton==3.2.0 in /usr/local/lib/python3.11/dist-packages (from torc
Requirement already satisfied: sympy==1.13.1 in /usr/local/lib/python3.11/dist-packages (from torc
Requirement already satisfied: mpmath<1.4,>=1.1.0 in /usr/local/lib/python3.11/dist-packages (from
Requirement already satisfied: MarkupSafe>=2.0 in /usr/local/lib/python3.11/dist-packages (from ji
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.11/dist-packages
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.11/dist-packages (from que
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.11/dist-packages (from
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.11/dist-packages (from
Downloading nvidia_cUBLAS_cu12-12.4.5.8-py3-none-manylinux2014_x86_64.whl (363.4 MB)
  _____ 363.4/363.4 MB 5.0 MB/s eta 0:00:00
Downloading nvidia_cuda_cupti_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl (13.8 MB)
  _____ 13.8/13.8 MB 122.0 MB/s eta 0:00:00
Downloading nvidia_cuda_nvrtc_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl (24.6 MB)
  _____ 24.6/24.6 MB 97.8 MB/s eta 0:00:00
Downloading nvidia_cuda_runtime_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl (883 kB)
  _____ 883.7/883.7 kB 55.3 MB/s eta 0:00:00
Downloading nvidia_cudnn_cu12-9.1.0.70-py3-none-manylinux2014_x86_64.whl (664.8 MB)
  _____ 664.8/664.8 MB 2.8 MB/s eta 0:00:00
Downloading nvidia_cufft_cu12-11.2.1.3-py3-none-manylinux2014_x86_64.whl (211.5 MB)
  _____ 211.5/211.5 MB 6.4 MB/s eta 0:00:00
Downloading nvidia_curand_cu12-10.3.5.147-py3-none-manylinux2014_x86_64.whl (56.3 MB)
  _____ 56.3/56.3 MB 21.5 MB/s eta 0:00:00
Downloading nvidia_cusolver_cu12-11.6.1.9-py3-none-manylinux2014_x86_64.whl (127.9 MB)
```

```
127.9/127.9 MB 8.2 MB/s eta 0:00:00
----- Downloading nvidia_cusparse_cu12-12.3.1.170-py3-none-manylinux2014_x86_64.whl (207.5 MB)
----- 207.5/207.5 MB 6.5 MB/s eta 0:00:00
----- Downloading nvidia_nvjitlink_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl (21.1 MB)
----- 21.1/21.1 MB 105.6 MB/s eta 0:00:00
Installing collected packages: nvidia-nvjitlink-cu12, nvidia-curand-cu12, nvidia-cufft-cu12, nvidi
Attempting uninstall: nvidia-nvjitlink-cu12
    Found existing installation: nvidia-nvjitlink-cu12 12.5.82
    Uninstalling nvidia-nvjitlink-cu12-12.5.82:
        Successfully uninstalled nvidia-nvjitlink-cu12-12.5.82
Attempting uninstall: nvidia-curand-cu12
    Found existing installation: nvidia-curand-cu12 10.3.6.82
    Uninstalling nvidia-curand-cu12-10.3.6.82:
        Successfully uninstalled nvidia-curand-cu12-10.3.6.82
Attempting uninstall: nvidia-cufft-cu12
    Found existing installation: nvidia-cufft-cu12 11.2.3.61
    Uninstalling nvidia-cufft-cu12-11.2.3.61:
        Successfully uninstalled nvidia-cufft-cu12-11.2.3.61
Attempting uninstall: nvidia-cuda-runtime-cu12
    Found existing installation: nvidia-cuda-runtime-cu12 12.5.82
    Uninstalling nvidia-cuda-runtime-cu12-12.5.82:
        Successfully uninstalled nvidia-cuda-runtime-cu12-12.5.82
Attempting uninstall: nvidia-cuda-nvrtc-cu12
    Found existing installation: nvidia-cuda-nvrtc-cu12 12.5.82
    Uninstalling nvidia-cuda-nvrtc-cu12-12.5.82:
        Successfully uninstalled nvidia-cuda-nvrtc-cu12-12.5.82
Attempting uninstall: nvidia-cuda-cupti-cu12
    Found existing installation: nvidia-cuda-cupti-cu12 12.5.82
    Uninstalling nvidia-cuda-cupti-cu12-12.5.82:
        Successfully uninstalled nvidia-cuda-cupti-cu12-12.5.82
Attempting uninstall: nvidia-cublas-cu12
    Found existing installation: nvidia-cublas-cu12 12.5.3.2
    Uninstalling nvidia-cublas-cu12-12.5.3.2:
        Successfully uninstalled nvidia-cublas-cu12-12.5.3.2
Attempting uninstall: nvidia-cusparse-cu12
    Found existing installation: nvidia-cusparse-cu12 12.5.1.3
    Uninstalling nvidia-cusparse-cu12-12.5.1.3:
        Successfully uninstalled nvidia-cusparse-cu12-12.5.1.3
Attempting uninstall: nvidia-cudnn-cu12
    Found existing installation: nvidia-cudnn-cu12 9.3.0.75
    Uninstalling nvidia-cudnn-cu12-9.3.0.75:
        Successfully uninstalled nvidia-cudnn-cu12-9.3.0.75
Attempting uninstall: nvidia-cusolver-cu12
    Found existing installation: nvidia-cusolver-cu12 11.6.3.83
    Uninstalling nvidia-cusolver-cu12-11.6.3.83:
        Successfully uninstalled nvidia-cusolver-cu12-11.6.3.83
Successfully installed nvidia-cublas-cu12-12.4.5.8 nvidia-cuda-cupti-cu12-12.4.127 nvidia-cuda-nv
WARNING: The following packages were previously imported in this runtime:
[nvidia]
You must restart the runtime in order to use newly installed versions.
```

RESTART SESSION

```
from transformers import pipeline

image_captioner = pipeline("image-to-text", model = 'Salesforce/blip-image-captioning-large', device=0

→ /usr/local/lib/python3.11/dist-packages/huggingface_hub/utils/_auth.py:94: UserWarning:
  The secret `HF_TOKEN` does not exist in your Colab secrets.
  To authenticate with the Hugging Face Hub, create a token in your settings tab (https://huggingface.co)
  You will be able to reuse this secret in all of your notebooks.
  Please note that authentication is recommended but still optional to access public models or datasets.
    warnings.warn(
config.json: 100%                                         4.60k/4.60k [00:00<00:00, 51.9kB/s]

model.safetensors: 100%                                     1.88G/1.88G [00:17<00:00, 178MB/s]

tokenizer_config.json: 100%                                 527/527 [00:00<00:00, 30.7kB/s]

vocab.txt: 100%                                         232k/232k [00:00<00:00, 4.33MB/s]

tokenizer.json: 100%                                     711k/711k [00:00<00:00, 8.29MB/s]

special_tokens_map.json: 100%                             125/125 [00:00<00:00, 8.17kB/s]

preprocessor_config.json: 100%                           445/445 [00:00<00:00, 41.0kB/s]

Using a slow image processor as `use_fast` is unset and a slow processor was saved with this model
Device set to use cpu
```

```
image = r'/content/tajmahajnight.jpg'
caption = image_captioner(image)
caption[0].get('generated_text')
```

→ 'there is a very large building with a reflection in the water'

```
vqa = pipeline('visual-question-answering')
```

→ No model was supplied, defaulted to dandelin/vilt-b32-finetuned-vqa and revision d0a1f6a (<https://huggingface.co/dandelin/vilt-b32-finetuned-vqa/rev/d0a1f6a>)
 Using a pipeline without specifying a model name and revision in production is not recommended.
 Device set to use cpu

```
image = r'/content/tajmahajnight.jpg'
```

```
q = input('Ask a question about the image: ')
result = vqa(image, q)
result
```

→ Ask a question about the image: what is this image

```
[{'score': 0.18740378320217133, 'answer': 'snow'},
 {'score': 0.08790417015552521, 'answer': 'church'},
 {'score': 0.053986966609954834, 'answer': 'white house'},
 {'score': 0.02755846455693245, 'answer': 'outside'},
 {'score': 0.02321023866534233, 'answer': 'building'}]
```

Start coding or generate with AI.

+ Code + Text

Start coding or generate with AI.

Start coding or generate with AI.

Start coding or generate with AI.