

```
!pip install diffusers transformers accelerate torch torchvision
```

```
Requirement already satisfied: diffusers in  
/usr/local/lib/python3.11/dist-packages (0.33.1)  
Requirement already satisfied: transformers in  
/usr/local/lib/python3.11/dist-packages (4.52.4)  
Requirement already satisfied: accelerate in  
/usr/local/lib/python3.11/dist-packages (1.7.0)  
Requirement already satisfied: torch in  
/usr/local/lib/python3.11/dist-packages (2.6.0+cu124)  
Requirement already satisfied: torchvision in  
/usr/local/lib/python3.11/dist-packages (0.21.0+cu124)  
Requirement already satisfied: importlib-metadata in  
/usr/local/lib/python3.11/dist-packages (from diffusers) (8.7.0)  
Requirement already satisfied: filelock in  
/usr/local/lib/python3.11/dist-packages (from diffusers) (3.18.0)  
Requirement already satisfied: huggingface-hub<=0.27.0 in  
/usr/local/lib/python3.11/dist-packages (from diffusers) (0.32.4)  
Requirement already satisfied: numpy in  
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Requirement already satisfied: tokenizers<0.22,>=0.21 in  
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Requirement already satisfied: tqdm<=4.27 in  
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/usr/local/lib/python3.11/dist-packages (from accelerate) (5.9.5)  
Requirement already satisfied: typing-extensions<=4.10.0 in  
/usr/local/lib/python3.11/dist-packages (from torch) (4.14.0)  
Requirement already satisfied: networkx in  
/usr/local/lib/python3.11/dist-packages (from torch) (3.5)  
Requirement already satisfied: jinja2 in  
/usr/local/lib/python3.11/dist-packages (from torch) (3.1.6)  
Requirement already satisfied: fsspec in  
/usr/local/lib/python3.11/dist-packages (from torch) (2025.3.2)  
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)
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manylinux2014_x86_64.whl.metadata (1.5 kB)
Collecting nvidia-cuda-cupti-cu12==12.4.127 (from torch)
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Collecting nvidia-cudnn-cu12==9.1.0.70 (from torch)
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Requirement already satisfied: nvidia-nvtx-cu12==12.4.127 in
/usr/local/lib/python3.11/dist-packages (from torch) (12.4.127)
Collecting nvidia-nvjitlink-cu12==12.4.127 (from torch)
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manylinux2014_x86_64.whl.metadata (1.5 kB)
Requirement already satisfied: triton==3.2.0 in
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Requirement already satisfied: sympy==1.13.1 in
/usr/local/lib/python3.11/dist-packages (from torch) (1.13.1)
Requirement already satisfied: mpmath<1.4,>=1.1.0 in
/usr/local/lib/python3.11/dist-packages (from sympy==1.13.1->torch)
(1.3.0)
Requirement already satisfied: hf-xet<2.0.0,>=1.1.2 in
/usr/local/lib/python3.11/dist-packages (from huggingface-hub>=0.27.0-
>diffusers) (1.1.2)
Requirement already satisfied: zipp>=3.20 in
/usr/local/lib/python3.11/dist-packages (from importlib-metadata-
>diffusers) (3.22.0)
Requirement already satisfied: MarkupSafe>=2.0 in
/usr/local/lib/python3.11/dist-packages (from jinja2->torch) (3.0.2)
Requirement already satisfied: charset-normalizer<4,>=2 in
```

```

/usr/local/lib/python3.11/dist-packages (from requests->diffusers)
(3.4.2)
Requirement already satisfied: idna<4,>=2.5 in
/usr/local/lib/python3.11/dist-packages (from requests->diffusers)
(3.10)
Requirement already satisfied: urllib3<3,>=1.21.1 in
/usr/local/lib/python3.11/dist-packages (from requests->diffusers)
(2.4.0)
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(2025.4.26)
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cu12, nvidia-cusparse-cu12, nvidia-cudnn-cu12, nvidia-cusolver-cu12
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:
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Attempting uninstall: nvidia-cuda-runtime-cu12
Found existing installation: nvidia-cuda-runtime-cu12 12.5.82
Uninstalling nvidia-cuda-runtime-cu12-12.5.82:
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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:
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Attempting uninstall: nvidia-cudnn-cu12
Found existing installation: nvidia-cudnn-cu12 9.3.0.75
Uninstalling nvidia-cudnn-cu12-9.3.0.75:
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Attempting uninstall: nvidia-cusolver-cu12
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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-nvrtc-cu12-12.4.127 nvidia-cuda-runtime-
cu12-12.4.127 nvidia-cudnn-cu12-9.1.0.70 nvidia-cufft-cu12-11.2.1.3
nvidia-curand-cu12-10.3.5.147 nvidia-cusolver-cu12-11.6.1.9 nvidia-
cusparse-cu12-12.3.1.170 nvidia-nvjitlink-cu12-12.4.127
```

```
from diffusers import DiffusionPipeline
import torch
model_id = "stabilityai/sdxl-turbo"
pipeline = DiffusionPipeline.from_pretrained(model_id,
torch_dtype=torch.float16)
pipeline.to("cuda")
```

```
/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/settings/tokens>), set it as secret in your Google Colab and restart your session. 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(
```

```
{"model_id": "c96d444206544ef387feb3ab65280935", "version_major": 2, "version_minor": 0}
```

```
{"model_id": "300ec299601144259b7a37ef2ed0947a", "version_major": 2, "version_minor": 0}
```

```
{"model_id": "b4207fee2aa7483bbb6785dffe35049d", "version_major": 2, "version_minor": 0}
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```

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```

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```

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```

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```

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```

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```

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```

```
{"model_id": "ada1f5f23fba4cfaabba4fb36095a25c", "version_major": 2, "version_minor": 0}
```

```
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  "_diffusers_version": "0.33.1",  
  "_name_or_path": "stabilityai/sd-xl-turbo",  
  "feature_extractor": [  
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  ],  
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  "image_encoder": [  
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    null  
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  ],  
  "text_encoder": [  
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  ],  
  "text_encoder_2": [  
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  ],  
  "tokenizer": [  
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    "CLIPTokenizer"  
  ],  
  "tokenizer_2": [  
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  ],  
  "unet": [  
    "diffusers",  
    "UNet2DConditionModel"  
  ],  
  "vae": [  
    "diffusers",  
    "AutoencoderKL"  
  ]  
}
```

```
]
}
```

```
prompt = "A cinematic 35mm film still, highly detailed, photorealistic, of a stoic man standing still on a wet, reflective brick city sidewalk at night, wearing a dark, oversized blazer. Moody, dramatic streetlights illuminate him, creating sharp shadows and volumetric light. A motion-blurred crowd rushes past, creating a sense of isolation. Shallow depth of field, sharp focus on the man's face."
```

```
num_inference_steps = 1
guidance_scale = 0.0
image = pipeline(prompt, num_inference_steps=num_inference_steps,
guidance_scale=guidance_scale).images[0]
image
```

Token indices sequence length is longer than the specified maximum sequence length for this model (84 > 77). Running this sequence through the model will result in indexing errors

The following part of your input was truncated because CLIP can only handle sequences up to 77 tokens: ["focus on the man's face."]

Token indices sequence length is longer than the specified maximum sequence length for this model (84 > 77). Running this sequence through the model will result in indexing errors

The following part of your input was truncated because CLIP can only handle sequences up to 77 tokens: ["focus on the man's face."]

```
{"model_id": "9a0495a1ba844e6e938ff5160919ba9f", "version_major": 2, "version_minor": 0}
```



```
from diffusers import DiffusionPipeline
import torch
model_id = "stabilityai/stable-diffusion-xl-base-1.0"

pipeline = DiffusionPipeline.from_pretrained(model_id,
torch_dtype=torch.float16, use_safetensors=True)
pipeline.to("cuda")

/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/settings/tokens>), set it as secret in your Google Colab and restart your session. 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(
```

```
{"model_id": "6f28d094afdb46feb7287e87bbd1a046", "version_major": 2, "version_minor": 0}
```

```
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```

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```

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```

```
{"model_id": "07c1fd27407c43a2854edfa58107c5f4", "version_major": 2, "version_minor": 0}
```

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{"model_id": "4fdded8cdcce4ba598fbf31f58d54552", "version_major": 2, "version_minor": 0}
```

```
{"model_id": "565c941ecd73443e8eac8f3df03dc47d", "version_major": 2, "version_minor": 0}
```

```
{"model_id": "404956d4e9474cb687e41878fa797f81", "version_major": 2, "version_minor": 0}
```

```
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```

```
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```

```
{"model_id": "7fc9040dcd3a4800bf686cad3d2c9012", "version_major": 2, "version_minor": 0}
```

```
{"model_id": "5cb9dd979a524b9b81e3f0891d419b16", "version_major": 2, "version_minor": 0}
```

```
StableDiffusionXLPipeline {
  "_class_name": "StableDiffusionXLPipeline",
  "_diffusers_version": "0.33.1",
  "_name_or_path": "stabilityai/stable-diffusion-xl-base-1.0",
  "feature_extractor": [
    null,
    null
  ],
  "force_zeros_for_empty_prompt": true,
  "image_encoder": [
    null,
    null
  ],
  "scheduler": [
    "diffusers",
    "EulerDiscreteScheduler"
  ],
  "text_encoder": [
    "transformers",
    "CLIPTextModel"
  ],
  "text_encoder_2": [
    "transformers",
    "CLIPTextModelWithProjection"
  ],
  "tokenizer": [
    "transformers",
    "CLIPTokenizer"
  ],
  "tokenizer_2": [
    "transformers",
    "CLIPTokenizer"
  ],
  "unet": [
    "diffusers",
    "UNet2DConditionModel"
  ],
  "vae": [
```

```

        "diffusers",
        "AutoencoderKL"
    ]
}

prompt = "A Girl holding a card saying do you love me to a guy real
life style High quality detailed and perfect face ."

negative_prompt = "low quality, bad anatomy, deformed, blurry, ugly,
distorted, noise, poor lighting, low resolution, bad hands, extra
limbs, text, signature, watermark"

num_inference_steps = 50
guidance_scale = 7.5

import random
seed = random.randint(0, 1000000)

generator = torch.Generator("cuda").manual_seed(seed)

image = pipeline(
    prompt=prompt,
    negative_prompt=negative_prompt,
    num_inference_steps=num_inference_steps,
    guidance_scale=guidance_scale,
    generator=generator
).images[0]

image

{"model_id": "79ed9c0c4939449eb2ebe82d1ec2732a", "version_major": 2, "version_minor": 0}

```

