

```
!pip install diffusers transformers accelerate --upgrade
!pip install safetensors
```

```
Requirement already satisfied: diffusers in /usr/local/lib/python3.11/dist-packages (0.34.0)
Requirement already satisfied: transformers in /usr/local/lib/python3.11/dist-packages (4.53.1)
Collecting transformers
  Downloading transformers-4.53.2-py3-none-any.whl.metadata (40 kB)
    40.9/40.9 kB 3.6 MB/s eta 0:00:00
Requirement already satisfied: accelerate in /usr/local/lib/python3.11/dist-packages (1.8.1)
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) (0.33.2)
Requirement already satisfied: numpy in /usr/local/lib/python3.11/dist-packages (from diffusers) (2.0.2)
Requirement already satisfied: regex!=2019.12.17 in /usr/local/lib/python3.11/dist-packages (from diffusers) (2024.11.6)
Requirement already satisfied: requests in /usr/local/lib/python3.11/dist-packages (from diffusers) (2.32.3)
Requirement already satisfied: safetensors>=0.3.1 in /usr/local/lib/python3.11/dist-packages (from diffusers) (0.5.3)
Requirement already satisfied: Pillow in /usr/local/lib/python3.11/dist-packages (from diffusers) (11.2.1)
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.11/dist-packages (from transformers) (24.2)
Requirement already satisfied: pyyaml>=5.1 in /usr/local/lib/python3.11/dist-packages (from transformers) (6.0.2)
Requirement already satisfied: tokenizers<0.22,>=0.21 in /usr/local/lib/python3.11/dist-packages (from transformers) (0.21.2)
Requirement already satisfied: tqdm>=4.27 in /usr/local/lib/python3.11/dist-packages (from transformers) (4.67.1)
Requirement already satisfied: psutil in /usr/local/lib/python3.11/dist-packages (from accelerate) (5.9.5)
Requirement already satisfied: torch>=2.0.0 in /usr/local/lib/python3.11/dist-packages (from accelerate) (2.6.0+cu124)
Requirement already satisfied: fsspec>=2023.5.0 in /usr/local/lib/python3.11/dist-packages (from huggingface-hub>=0.27.0->diffusers)
Requirement already satisfied: typing-extensions>=3.7.4.3 in /usr/local/lib/python3.11/dist-packages (from huggingface-hub>=0.27.0->diffusers)
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)
Requirement already satisfied: networkx in /usr/local/lib/python3.11/dist-packages (from torch>=2.0.0->accelerate) (3.5)
Requirement already satisfied: Jinja2 in /usr/local/lib/python3.11/dist-packages (from torch>=2.0.0->accelerate) (3.1.6)
Collecting nvidia-cuda-nvrtc-cu12==12.4.127 (from torch>=2.0.0->accelerate)
  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>=2.0.0->accelerate)
  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>=2.0.0->accelerate)
  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>=2.0.0->accelerate)
  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>=2.0.0->accelerate)
  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>=2.0.0->accelerate)
  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>=2.0.0->accelerate)
  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>=2.0.0->accelerate)
  Downloading nvidia_cusolver_cu12-11.6.1.9-py3-none-manylinux2014_x86_64.whl.metadata (1.6 kB)
Collecting nvidia-cusparselt-cu12==0.6.2 (from torch>=2.0.0->accelerate)
  Downloading nvidia_cusparselt_cu12-0.6.2-py3-none-manylinux2014_x86_64.whl.metadata (1.6 kB)
Requirement already satisfied: nvidia-cusparselt-cu12==0.6.2 in /usr/local/lib/python3.11/dist-packages (from torch>=2.0.0->accelerate)
Requirement already satisfied: nvidia-nccl-cu12==2.21.5 in /usr/local/lib/python3.11/dist-packages (from torch>=2.0.0->accelerate)
Requirement already satisfied: nvidia-nvtx-cu12==12.4.127 in /usr/local/lib/python3.11/dist-packages (from torch>=2.0.0->accelerate)
Collecting nvidia-nvjitlink-cu12==12.4.127 (from torch>=2.0.0->accelerate)
  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 torch>=2.0.0->accelerate) (3.2.0)
Requirement already satisfied: sympy==1.13.1 in /usr/local/lib/python3.11/dist-packages (from torch>=2.0.0->accelerate) (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>=2.0.0->accelerate)
Requirement already satisfied: zipp>=3.20 in /usr/local/lib/python3.11/dist-packages (from importlib_metadata->diffusers) (3.23.0)
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)
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.11/dist-packages (from requests->diffusers) (2025.7.9)
Requirement already satisfied: MarkupSafe>=2.0 in /usr/local/lib/python3.11/dist-packages (from Jinja2->torch>=2.0.0->accelerate) (3.0.2)
Downloading transformers-4.53.2-py3-none-any.whl (10.8 MB)
```

```
import torch
from diffusers import StableDiffusionPipeline
import matplotlib.pyplot as plt
```

```
from huggingface_hub import login
```

```
login("hf_DUYpWpQuECjKZXfnvIpoiHPtKaFiRxuLd")
```

```
from diffusers import StableDiffusionPipeline
```

```
pipe=StableDiffusionPipeline.from_pretrained("runwayml/stable-diffusion-v1-5", torch_dtype=torch.float16,
                                             use_safetensors=True
                                             ).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 :
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_index.json: 100% 541/541 [00:00<00:00, 16.3kB/s]
Fetching 15 files: 100% 15/15 [01:00<00:00, 4.22s/it]
model.safetensors: 100% 1.22G/1.22G [00:36<00:00, 17.0MB/s]
model.safetensors: 100% 492M/492M [00:18<00:00, 10.2MB/s]
config.json: 4.72k/? [00:00<00:00, 49.2kB/s]
config.json: 100% 617/617 [00:00<00:00, 4.21kB/s]
scheduler_config.json: 100% 308/308 [00:00<00:00, 1.94kB/s]
preprocessor_config.json: 100% 342/342 [00:00<00:00, 2.01kB/s]
merges.txt: 525k/? [00:00<00:00, 126kB/s]
special_tokens_map.json: 100% 472/472 [00:00<00:00, 2.75kB/s]
diffusion_pytorch_model.safetensors: 100% 3.44G/3.44G [00:58<00:00, 240MB/s]
diffusion_pytorch_model.safetensors: 100% 335M/335M [00:10<00:00, 66.2MB/s]
tokenizer_config.json: 100% 806/806 [00:00<00:00, 15.9kB/s]
config.json: 100% 743/743 [00:00<00:00, 16.3kB/s]
vocab.json: 1.06M/? [00:00<00:00, 2.98MB/s]
config.json: 100% 547/547 [00:00<00:00, 5.85kB/s]
Loading pipeline components...: 100% 7/7 [00:10<00:00, 1.06s/it]
```

```
user_prompt=input("Enter your prompt:")
image=pipe(user_prompt).images[0]
plt.imshow(image)
plt.axis("off")
plt.title("Generated Image")
plt.show()
```

```
→ Enter your prompt:A girl is making her drawing
100% 50/50 [00:07<00:00, 7.20it/s]
```

Generated Image



