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

```
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Downloading nvidia_cuda_runtime_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl (883 kB)
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Downloading nvidia_cudnn_cu12-9.1.0.70-py3-none-manylinux2014_x86_64.whl (664.8 MB)
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Downloading nvidia_cufft_cu12-11.2.1.3-py3-none-manylinux2014_x86_64.whl (211.5 MB)
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Downloading nvidia_curand_cu12-10.3.5.147-py3-none-manylinux2014_x86_64.whl (56.3 MB)
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Downloading nvidia_cusolver_cu12-11.6.1.9-py3-none-manylinux2014_x86_64.whl (127.9 MB)
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Downloading nvidia_cusparse_cu12-12.3.1.170-py3-none-manylinux2014_x86_64.whl (207.5 MB)
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Downloading nvidia_nvjitlink_cu12-12.4.127-py3-none-manylinux2014_x86_64.whl (21.1 MB)
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Installing collected packages: nvidia-nvjitlink-cu12, nvidia-curand-cu12, nvidia-cufft-cu12, nvidia-cuda-runtime-cu12, nvidia-cuda-nvr
  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-nvrtc-cu12-12.4.127 nvidia-cuda-runtime
```

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


authorization_token = ""
modelid = "CompVis/stable-diffusion-v1-4"
device = "cuda"


pipe = StableDiffusionPipeline.from_pretrained(modelid, revision="fp16", torch_dtype=torch.float16, use_auth_token=authorization_token)
pipe.to(device)
```

```
/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 secre
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%                                                543/543 [00:00<00:00, 56.9kB/s]
/usr/local/lib/python3.11/dist-packages/diffusers/pipelines/pipeline_loading_utils.py:242: FutureWarning: You are loading the variant fp
  warnings.warn(
Fetching 16 files: 100%                                               16/16 [00:24<00:00,  1.48s/it]
Xet Storage is enabled for this repo, but the 'hf_xet' package is not installed. Falling back to regular HTTP download. For better perfo
WARNING:huggingface_hub.file_download:Xet Storage is enabled for this repo, but the 'hf_xet' package is not installed. Falling back to r
Xet Storage is enabled for this repo, but the 'hf_xet' package is not installed. Falling back to regular HTTP download. For better perfo
WARNING:huggingface_hub.file_download:Xet Storage is enabled for this repo, but the 'hf_xet' package is not installed. Falling back to r
config.json: 100%                                                     4.63k/4.63k [00:00<00:00, 321kB/s]
preprocessor_config.json: 100%                                        342/342 [00:00<00:00, 9.09kB/s]
pytorch_model.bin: 100%                                               608M/608M [00:19<00:00, 59.9MB/s]
scheduler_config.json: 100%                                           307/307 [00:00<00:00, 6.70kB/s]
scheduler_config-checkpoint.json: 100%                                209/209 [00:00<00:00, 3.13kB/s]
config.json: 100%                                                     572/572 [00:00<00:00, 8.81kB/s]
merges.txt: 100%                                                      525k/525k [00:00<00:00, 2.33MB/s]
pytorch_model.bin: 100%                                               246M/246M [00:08<00:00, 16.9MB/s]
Xet Storage is enabled for this repo, but the 'hf_xet' package is not installed. Falling back to regular HTTP download. For better perfo
WARNING:huggingface_hub.file_download:Xet Storage is enabled for this repo, but the 'hf_xet' package is not installed. Falling back to r
special_tokens_map.json: 100%                                         472/472 [00:00<00:00, 12.9kB/s]
tokenizer_config.json: 100%                                           788/788 [00:00<00:00, 30.4kB/s]
vocab.json: 100%                                                      1.06M/1.06M [00:00<00:00, 4.43MB/s]
config.json: 100%                                                     772/772 [00:00<00:00, 21.4kB/s]
diffusion_pytorch_model.bin: 100%                                     1.72G/1.72G [00:23<00:00, 256MB/s]
config.json: 100%                                                     550/550 [00:00<00:00, 6.91kB/s]
Xet Storage is enabled for this repo, but the 'hf_xet' package is not installed. Falling back to regular HTTP download. For better perfo
WARNING:huggingface_hub.file_download:Xet Storage is enabled for this repo, but the 'hf_xet' package is not installed. Falling back to r
diffusion_pytorch_model.bin: 100%                                     167M/167M [00:08<00:00, 24.5MB/s]
Keyword arguments {'use_auth_token': ''} are not expected by StableDiffusionPipeline and will be ignored.
Loading pipeline components...: 100%                                  7/7 [00:02<00:00,  2.60it/s]
An error occurred while trying to fetch /root/.cache/huggingface/hub/models--CompVis--stable-diffusion-v1-4/snapshots/2880f2ca379f41b022
Defaulting to unsafe serialization. Pass `allow_pickle=False` to raise an error instead.
An error occurred while trying to fetch /root/.cache/huggingface/hub/models--CompVis--stable-diffusion-v1-4/snapshots/2880f2ca379f41b022
Defaulting to unsafe serialization. Pass `allow_pickle=False` to raise an error instead.
/usr/local/lib/python3.11/dist-packages/transformers/models/clip/feature_extraction_clip.py:28: FutureWarning: The class CLIPFeatureExtr
  warnings.warn(
StableDiffusionPipeline {
  "_class_name": "StableDiffusionPipeline",
  "_diffusers_version": "0.32.2",
  "_name_or_path": "CompVis/stable-diffusion-v1-4",
  "feature_extractor": [
    "transformers",
    "CLIPFeatureExtractor"
  ],
  "image_encoder": [
    null,
    null
  ],
  "requires_safety_checker": true,
  "safety_checker": [
    "stable_diffusion",
    "StableDiffusionSafetyChecker"
  ],
  "scheduler": [
    "diffusers",
    "PNDMScheduler"
  ],
  "text_encoder": [
    "transformers",
    "CLIPTextModel"
  ],
  "tokenizer": [
    "transformers",
    "CLIPTokenizer"
```

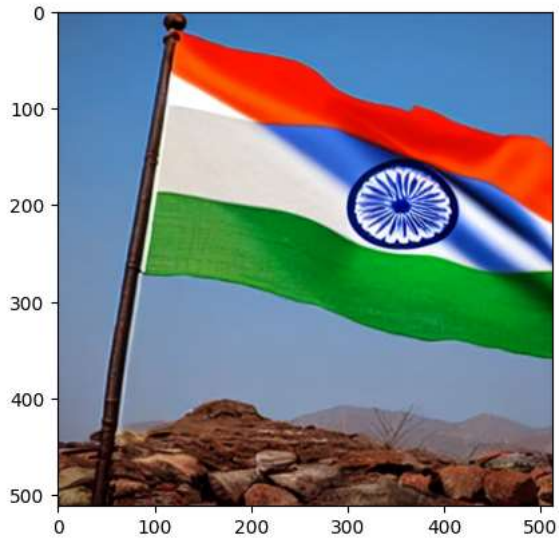
```
      ],
      "unet": [
        "diffusers",
        "UNet2DConditionModel"
      ],
      "vae": [
        "diffusers",
        "AutoencoderKL"
      ]
    }
```

```
with autocast(device):
  textprompt = str(input("Enter your prompt: "))

  image = pipe(textprompt, guidance_scale=8.5).images[0]

  imgplot = plt.imshow(image)
```

```
Enter your prompt: Indian Tricolor flag
100%                                                 50/50 [00:07<00:00,  6.78it/s]
```

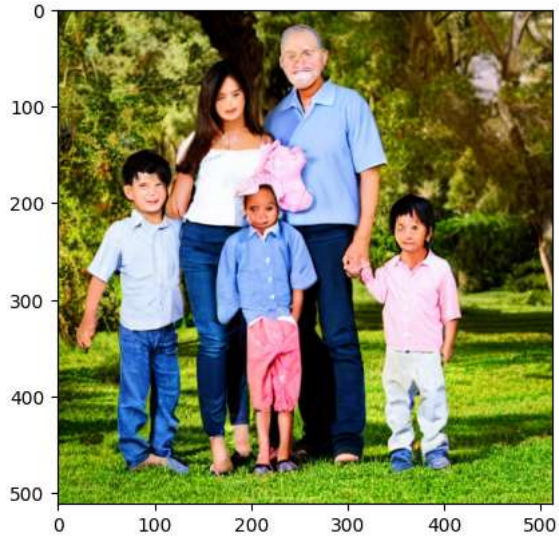



```
with autocast(device):
  textprompt = str(input("Enter your promt: "))

  image = pipe(textprompt, guidance_scale=8.5).images[0]

  imgplot = plt.imshow(image)
```

```
Enter your promt: a family of four father mother boy girl
100%                                                 50/50 [00:08<00:00,  6.19it/s]
```



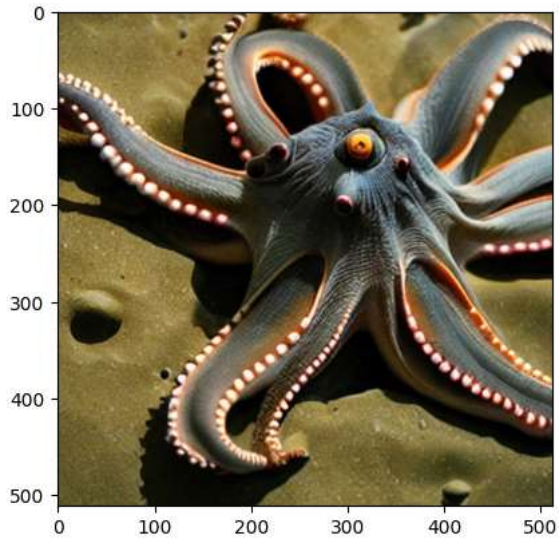
```
with autocast(device):
  textprompt = str(input("Enter your promt: "))

  image = pipe(textprompt, guidance_scale=8.5).images[0]

  imgplot = plt.imshow(image)
```

```
Enter your promt: an octopus saying hi
```

```
100%                                                  50/50 [00:08<00:00,  6.14it/s]
```



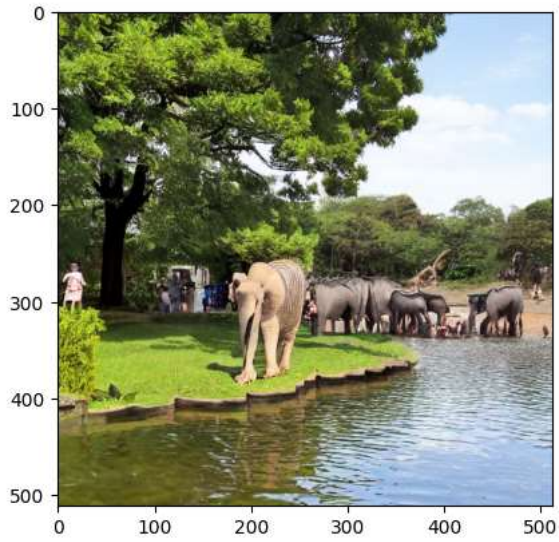

```
with autocast(device):
  textprompt = str(input("Enter your promt: "))

  image = pipe(textprompt, guidance_scale=8.5).images[0]

  imgplot = plt.imshow(image)
```

```
Enter your promt: a zoo with animals and lake
```

```
100%                                                  50/50 [00:08<00:00,  6.04it/s]
```



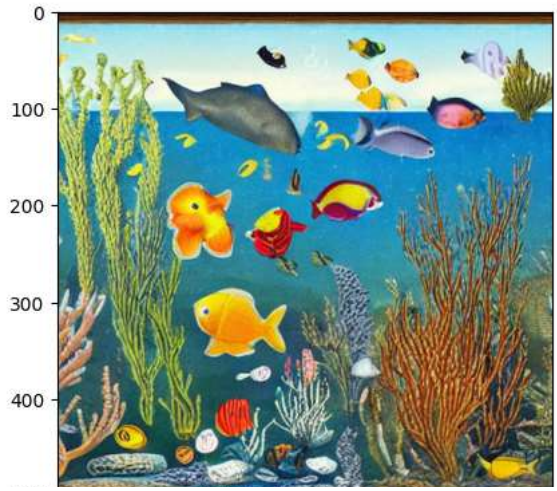

```
with autocast(device):
  textprompt = str(input("Enter your promt: "))

  image = pipe(textprompt, guidance_scale=8.5).images[0]

  imgplot = plt.imshow(image)
```

```
Enter your promt: a sea with all flora and fauna
```

```
100%                                                 50/50 [00:08<00:00,  5.34it/s]
```




```
with autocast(device):
  textprompt = str(input("Enter your promt: "))

  image = pipe(textprompt, guidance_scale=8.5).images[0]

  imgplot = plt.imshow(image)
```

```
Enter your promt: a puppy with it's friend puppy
```

```
100%                                                 50/50 [00:08<00:00,  5.82it/s]
```