My Stable Diffusion- What I Did

**Setup**

First, I installed the required libraries:

!pip install diffusers transformers accelerate safetensors --upgrade

!pip install torch torchvision torchaudio --index-url https://download.pytorch.org/whl/cu118

# 1: Basic Image Generation

**What I did:**

* Used Stable Diffusion v1.5 model
* Created a simple prompt: "a photo of an astronaut riding a horse on mars"
* Generated the image and saved it as "astronaut\_rides\_horse.png"

**Code:**

from diffusers import StableDiffusionPipeline

import torch

model\_id = "sd-legacy/stable-diffusion-v1-5"

pipe = StableDiffusionPipeline.from\_pretrained(model\_id, torch\_dtype=torch.float16)

pipe = pipe.to("cuda")

prompt = "a photo of an astronaut riding a horse on mars"

image = pipe(prompt).images[0]

image.save("astronaut\_rides\_horse.png")

# 2: Mountain Scenery (First Try)

**What I did:**

* Used the same model setup
* Set a fixed seed (45) for reproducible results
* Prompted for: "give me a scenery with mountains"
* Saved as "scenery.png"

**Code:**

from diffusers import StableDiffusionPipeline

import torch

model\_id = "sd-legacy/stable-diffusion-v1-5"

pipe = StableDiffusionPipeline.from\_pretrained(model\_id, torch\_dtype=torch.float16)

pipe = pipe.to("cuda")

seed = 45

generator = torch.Generator("cuda").manual\_seed(seed)

prompt = "give me a scenery with mountains"

image = pipe(prompt, generator=generator).images[0]

image.save("scenery.png")

# 3: Mountain Scenery with Negative Prompt

**What I did:**

* Used the same prompt and seed as before
* **Added negative prompt**: "river, frame, text" to exclude unwanted elements
* Saved as "scenery\_.png"
* **Purpose**: Compare how negative prompting affects the result
* **RESULT**: This didn't give me the results I wanted - the negative prompting didn't work as expected

**Code:**

from diffusers import StableDiffusionPipeline

import torch

model\_id = "sd-legacy/stable-diffusion-v1-5"

pipe = StableDiffusionPipeline.from\_pretrained(model\_id, torch\_dtype=torch.float16)

pipe = pipe.to("cuda")

seed = 45

generator = torch.Generator("cuda").manual\_seed(seed)

prompt = "give me a scenery with mountains"

negative\_prompt = "river, frame, text"

image = pipe(prompt, generator=generator, negative\_prompt=negative\_prompt).images[0]

image.save("scenery\_.png")

# 4: Living Room (Without Negative Prompt)

**What I did:**

* Since Experiment 3 didn't work, I changed to interior design theme to try something different
* Prompt: "a well organized living room with bright walls, pink sofa and dining table"
* Used same seed (45) for consistency
* Saved as "scenery\_without\_negative\_prompt.png"
* **Purpose**: Test negative prompting on a different type of scene

**Code:**

from diffusers import StableDiffusionPipeline

import torch

model\_id = "sd-legacy/stable-diffusion-v1-5"

pipe = StableDiffusionPipeline.from\_pretrained(model\_id, torch\_dtype=torch.float16)

pipe = pipe.to("cuda")

seed = 45

generator = torch.Generator("cuda").manual\_seed(seed)

prompt = "a well organized living room with bright walls, pink sofa and dining table "

image = pipe(prompt=prompt, generator=generator).images[0]

image.save("scenery\_without\_negative\_prompt.png")

# 5: Living Room (With Negative Prompt)

**What I did:**

* Used the exact same prompt and seed as Experiment 4
* **Added negative prompt**: "chair, flower vase" to exclude these items
* Saved as "enhanced\_scenery.png"
* **RESULT**: This time it worked! I got much better results with negative prompting
* **Success**: Finally achieved the desired effect by excluding unwanted furniture items

**Code:**

from diffusers import StableDiffusionPipeline

import torch

model\_id = "sd-legacy/stable-diffusion-v1-5"

pipe = StableDiffusionPipeline.from\_pretrained(model\_id, torch\_dtype=torch.float16)

pipe = pipe.to("cuda")

seed = 45

generator = torch.Generator("cuda").manual\_seed(seed)

prompt = "a well organized living room with bright walls, pink sofa and dining table"

negative\_prompt = "chair, flower vase"

image = pipe(prompt=prompt, negative\_prompt=negative\_prompt, generator=generator).images[0]

image.save("enhanced\_scenery.png")

# My Trial and Error Process

1. **Started simple** - Basic astronaut image to test the setup
2. **Added seed control** - Used seed=45 to get consistent results for comparison
3. **First negative prompt attempt FAILED** - Tried excluding "river, frame, text" from mountain scenes but didn't get good results
4. **Changed strategy** - Switched to interior design (living room) to try negative prompting on a different type of scene
5. **SUCCESS with living room** - Excluded "chair, flower vase" and finally got the results I wanted!

# What I Learned

* Negative prompts don't always work on the first try
* Some scenes respond better to negative prompting than others
* Mountain/landscape scenes were harder to control with negative prompts
* Interior design scenes worked much better for negative prompting
* Trial and error with different scenes and negative prompt words is essential
* Don't give up after one failed attempt - try different approaches and scene types