installing and running Stable Diffusion on 64-bit Ubuntu 22.04 LTS

Asked 1 year, 2 months ago Modified 5 months ago Viewed 16k times

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https://github.com/CompVis/stable-diffusion/

Does anyone have this working on 64-bit Ubuntu 22.04 LTS? Could you share steps on how to get it working, or just link to a known tested/working guide for same?

python gpu

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asked Oct 25, 2022 at 16:25

Adam Monsen
2,167 5 22 43

3 Have you tried following their instructions? Which is clone the repository, the Conda dependencies, and then created the Conda environment per the git repository's readme? – Thomas Ward ♦ Oct 25, 2022 at 16:28

Yes, for an hour or so a day for the last few days. :-) I was kinda looking for the "easy button". This is a daunting install. I'm not even sure if I have a GPU that works. I saw mention of CPU-only usage, but, seriously, this is way harder to just get going than your average `apt install` . Or maybe it's just that the docs are not well-written? I'll keep trying and report back... – Adam Monsen Oct 26, 2022 at 14:21

1 So far for me, the Conda environment coughs up an error that I can't debug, and I'm kinda done right there before even getting started on Stable Diffusion. This installation is not for the faint-of-terminal – Invention1 Apr 2 at 16:33

3 Answers

Sorted by: Highest score (default)

6

Got it. I'll write it up in case it helps another. This will initially only cover CPU "sampling" (generating an image) until I get GPU sampling working. Sampling should run entirely offline.

install with pip

1. `pip install --upgrade diffusers transformers scipy torch`
2. `sudo apt install git-lfs`
3. clone the git repository at `https://huggingface.co/runwayml/stable-diffusion-v1-5` (you have to log in or sign up first and accept their license agreement)

Then you can create a small Python script (inside your local working copy of the cloned git

repo above) and run it to try sampling for yourself:

```
from diffusers import StableDiffusionPipeline
pipe = StableDiffusionPipeline.from_pretrained('.')
prompt = "a photo of an astronaut riding a horse on mars"
image = pipe(prompt).images[0]
image.save("astronaut_rides_horse.png")
```

easier and better method

https://github.com/invoke-ai/InvokeAI#installation

This provides a really nice web GUI, too.

onboard GPU note

My GPU shows up as `Intel CometLake-S GT2 [UHD Graphics 630]` from `lspci | grep VGA` or `neofetch`. `screenfetch` calls it `Mesa Intel(R) UHD Graphics 630 (CML GT2)`. Either way I don't know how to use this GPU for sampling (or if it is even possible).

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edited Oct 31, 2022 at 18:33

answered Oct 26, 2022 at 20:36

Adam Monsen
2,167 5 22 43

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From your comment:

> I was kinda looking for the "easy button"

A fairly large portion (probably a majority) of Stable Diffusion users currently use a local installation of the AUTOMATIC1111 web-UI. There's an installation script that also serves as the primary launch mechanism (performs Git updates on each launch):

```
sudo apt install wget git python3 python3-venv # system dependencies
bash <(wget -qO- https://raw.githubusercontent.com/AUTOMATIC1111/stable-
diffusion-webui/master/webui.sh)
# Download model file(s) (e.g. Hugging Face account, which does require an
account and login) and install into `models/Stable-Diffusion` subdirectory
```

Full dependencies and optional dependencies are on this page.

This particular repository seems to move at a lightning pace, and has quickly added a number of features with documentation.

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answered Oct 31, 2022 at 19:48

NotTheDr01ds
16.7k 6 56 91

There's never an 'easy' button when it comes to Python. e.g. the above gets to `########################################################################` Launching `launch.py...` `########################################################################` `Python 3.10.6 (main, Nov 2 2022, 18:53:38) [GCC 11.3.0] Commit hash: 828438b4a190759807f9054932cae3a8b880ddf1 Installing torch and torchvision` and fails with `RuntimeError: Error running command. .` – Snowcrash Nov 22, 2022 at 10:59

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Late to the party, but Stable Diffusion 2.1 (base) is just as simple:

```
from PIL import Image
from diffusers import StableDiffusionPipeline, EulerDiscreteScheduler
import torch

prompt = "Smurf village in summer"
iterations = 100

model_id = "stabilityai/stable-diffusion-2-1-base"

print("Loading model")
scheduler = EulerDiscreteScheduler.from_pretrained(model_id,
subfolder="scheduler")
pipe = StableDiffusionPipeline.from_pretrained(model_id, scheduler=scheduler,
torch_dtype=torch.float16)
pipe = pipe.to("cuda")

image = pipe(prompt, guidance_scale=9,
num_inference_steps=iterations).images[0]
image.save("output.jpg", 'JPEG', quality=70)
print("Image saved as output.jpg")
```

Works like a charm for me, give this a try. Same requirements as stated above:

```
pip install pillow diffusers torch
```

I wrote a little prose around this here, but essentially this is what you need to run.

Hope this helps!

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answered Jul 10 at 8:04

jan

1 2