# RUN LLM SD 1.5 from scratch ROCm

## Requirments

* AMD Mi50/MI100 32Gb VRAM
* Workstation 40 GB RAM, 200GB SSD, 750W Power supply
* Ubuntu 24.04 LTS HWE Kernel
* Install python 3.11 or 3.12

## Steps

### Get the most popular LLM StableDiffusion 1.5

git lfs install  
git clone https://huggingface.co/stable-diffusion-v1-5/stable-diffusion-v1-5 sd1.5

### Preapre python environment for ROCm:

python3 -m venv .venv\_llm\_sd1.5  
source ./.venv\_llm\_sd1.5/bin/activate  
python -m pip install --upgrade pip  
pip install torch torchvision torchaudio --index-url https://download.pytorch.org/whl/rocm6.0  
pip install transformers accelerate diffusers safetensors  
python .\test\_rocm\_sd1.5.py

### Create script test\_rocm\_sd1.5.py:

from diffusers import StableDiffusionPipeline  
import torch  
  
print("GPU available:", torch.cuda.is\_available())  
print("GPU name:", torch.cuda.get\_device\_name(0))  
  
pipe = StableDiffusionPipeline.from\_pretrained(  
 "/home/sysadmin/llm/sd1.5",  
 torch\_dtype=torch.bfloat16,  
 safety\_checker=None,  
 feature\_extractor=None,  
 use\_safetensors=True,  
 local\_files\_only=True  
)  
  
pipe = pipe.to("cuda")  
  
out = pipe(  
 prompt= "cat sitting on a chair",  
 height=512, width=512, guidance\_scale=9, num\_inference\_steps=80)  
image = out.images[0]  
  
image.save("test.png", format="PNG")

### Open test.png and enjoy the result!