

# Everything Stable Diffusion

A latent text-to-image diffusion model.

You'll find here different installation instructions for different git repositories

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# Basic StableDiffusion

here you will find the normal StableDiffusion install guide

# Stable Diffusion

## Stable Diffusion version 2.1

### **stable diffusion v-2-1 768x768**

```
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/m3PhfQtImYOIEUI/download -O v2-1_768-ema-pruned.ckpt
```

### **stable diffusion v-2-1 512x512 (base)**

```
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/Kpgz0TuejYcjY4t/download -O v2-1_512-ema-pruned.ckpt
```

### **MIDAS (Depth prediction)**

```
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/qzm306xfHdTm9Jk/download -O dpt_large-midas-2f21e586.pt
```

### **NYU AdaBins**

```
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/fTpi3vOXrNWvhK1/download -O AdaBins_nyu.pt
```

---

# Stable Diffusion with depth2image

## stable diffusion depth ema

```
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/cOU4j8ZXa65PmqI/download -O 512-depth-ema.ckpt
```

## dpt hybrid MidaS

- should be placed in a folder named midas\_models

```
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/Ju8NIHuNDMFQ8SP/download -O dpt_hybrid-midas-501f0c75.pt
```

# Stable Diffusion v1

## 📦ProtoGen 3.4 📦

```
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/2MTmmPTeuSu20MY/download -O ProtoGen_X3.4.ckpt
```

## Stable Diffusion v 1.5 pruned emanoly

```
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/LwN49UHfYkVH2zE/download -O v1-5-pruned-emaonly.ckpt
```

# Upscaling

## x4-upscaler-ema.ckpt

```
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/QmvMgK31iSQ4MS1/download -O  
x4-upscaler-ema.ckpt
```

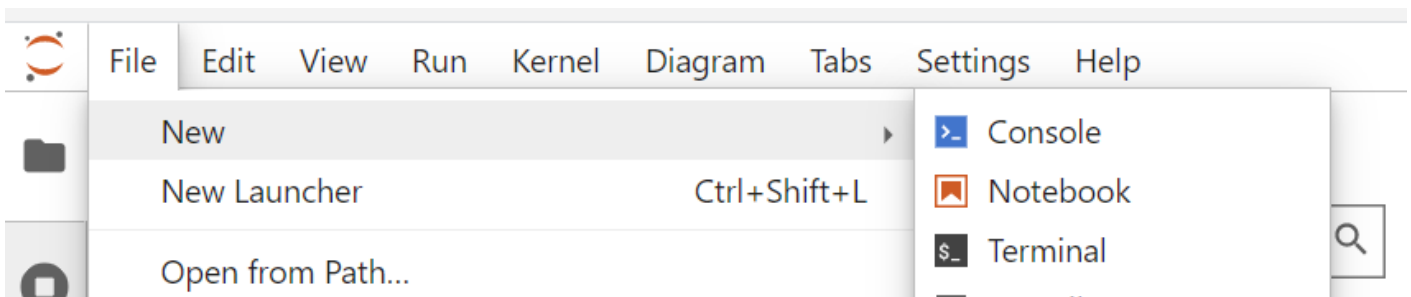
# Different versions of StableDiffusion

there are various sub git repositories for StableDiffusion, for example WebUi, ComfyUi, ...  
you will find them [here](#)

# Installation: Stable Diffusion Web UI by Automatic1111 (+ Deforum Extension)

## WebUI: Installation

### 1. Open a terminal



### 2. Run the following commands in terminal in this order:

Download the stable-diffusion-webui repository

```
git clone https://github.com/AUTOMATIC1111/stable-diffusion-webui.git
```

Change directory and navigate to the Stable Diffusion folder

```
cd stable-diffusion-webui/models/Stable-diffusion
```

### 3. Download a Stable Diffusion Model from [KISD Model Zoo](#)

Downloading ONE version is enough to get you started.

Stable Diffusion v-2-1 512x512 (base)

```
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/Kpgz0TuejYcjY4t/download -O v2-1_512-ema-pruned.ckpt
```

Stable Diffusion v-2-1 768x768

```
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/m3PhfQtImYOIEUI/download -O v2-1_768-ema-pruned.ckpt
```

## 4. Change access rights of file *webui.sh*

Return back to home directory

```
cd
```

Change directory and navigate to the stable-diffusion-webui folder

```
cd stable-diffusion-webui
```

Run this command to assign execution rights

```
chmod +x webui.sh
```

Optional: Install Deforum Extension

## 5. Run *webui.sh*

```
./webui.sh --share
```

6. In the terminal code, search for the `public URL` (Running on public URL: `https:// xxxxxxxx-xxxx-xxxx-.gradio.live`) and copy it to your browser

7. If you receive the following error message after trying to generate your first image, in the WebUI go to Settings > Stable Diffusion > & check the box for "Upcast cross attention layer to float" > Apply settings & Reload UI

NansException: A tensor with all NaNs was produced in Unet. This could be either because there's not enough precision to represent the picture, or because your video card does not

support half type. Try setting the "Upcast cross attention layer to float32" option in Settings > Stable Diffusion or using the --no-half commandline argument to fix this. Use --disable-nan-check commandline argument to disable this check.

Training

Stable Diffusion

Compatibility

Interrogate

Options

Extra Networks

User interface

Live previews

Sampler parameters

Postprocessing

Actions

Licenses

Show all pages

Noise multiplier for img2img

☐ Apply color correction to img2img results to match original colors.

☐ With img2img, do exactly the amount of steps the slider specifies (normally you'd do less with less denoising).

With img2img, fill image's transparent parts with this color.

☐ Enable quantization in K samplers for sharper and cleaner results. This may change existing seeds. Requires restart to apply.

☒ Emphasis: use (text) to make model pay more attention to text and [text] to make it pay less attention

☒ Make K-diffusion samplers produce same images in a batch as when making a single image

☒ Increase coherency by padding from the last comma within n tokens when using more than 75 tokens

Clip skip

☒ Upcast cross attention layer to float32

8. At end of use: Within the interface, go to File > Hub Control Panel > Stop My Server

## Deform Extention (Animation for SD): Installation

1. Open a terminal & navigate to the stable-diffusion-webui folder

```
cd stable-diffusion-webui
```

2. Download the Deform repository

```
git clone https://github.com/deform-art/deform-for-automatic1111-webui/ extensions/deform
```

Tutorial recommendation: [Deform Settings Explained - Part 1 Stable Diffusion Automatic 1111](#)

# After Installation: Running Stable Diffusion WebUI

1. Open a terminal & navigate to the stable-diffusion-webui folder

```
cd stable-diffusion-webui
```

2. Run *webui.sh*

```
./webui.sh --share
```

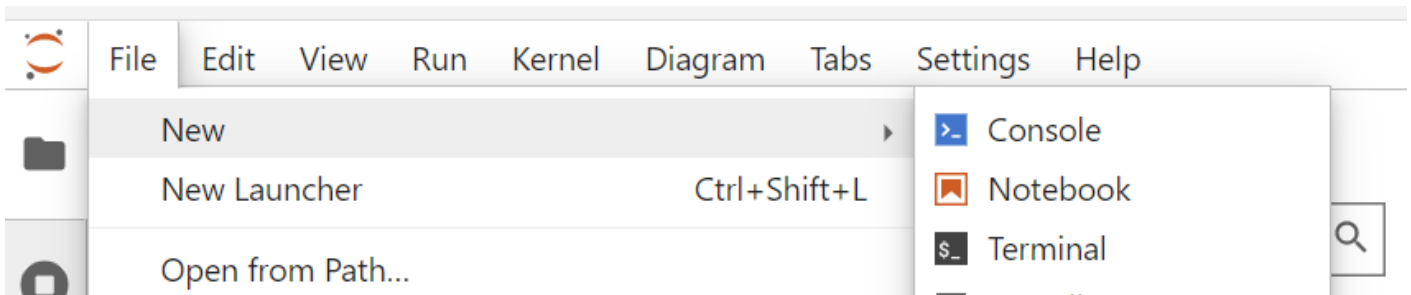
3. In the terminal code, search for the `public URL` (Running on public URL: `https:// xxxxxxxx-xxxx-xxxx-.gradio.live`) and copy it to your browser

4. At end of use: Within the interface, go to File > Hub Control Panel > Stop My Server

# Installation: ComfyUI

## ComfyUI: Installation

### 1. Open a terminal



### 2. Run the following commands in terminal in this order

#### 2.1. Download the ComfyUI repository

```
git clone https://github.com/comfyanonymous/ComfyUI
```

#### 2.2. Navigate to the "custom\_nodes" folder and download the ComfyUI Manager

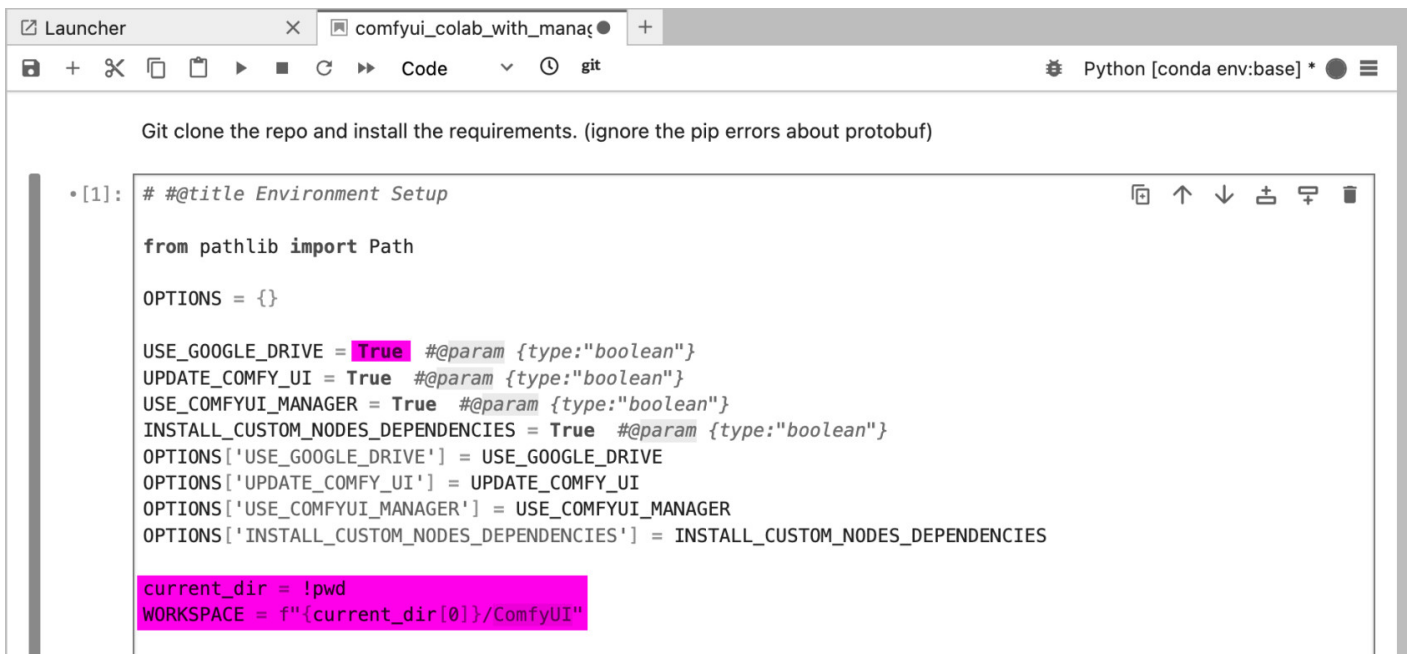
```
cd ComfyUI/custom_nodes
```

```
git clone https://github.com/ltldrdata/ComfyUI-Manager
```

### 3. Navigate to the ComfyUI with Manager notebook and open it:

Path: `ComfyUI/custom_nodes/ComfyUI-Manager/notebooks/comfyui_colab_with_manager.ipynb`

### 4. Make following changes to the notebook:



The screenshot shows a Jupyter Notebook window titled 'comfyui\_colab\_with\_manag...'. The code cell contains the following text:

```
Git clone the repo and install the requirements. (ignore the pip errors about protobuf)

•[1]: # #@title Environment Setup

from pathlib import Path

OPTIONS = {}

USE_GOOGLE_DRIVE = True #@param {type:"boolean"}
UPDATE_COMFY_UI = True #@param {type:"boolean"}
USE_COMFYUI_MANAGER = True #@param {type:"boolean"}
INSTALL_CUSTOM_NODES_DEPENDENCIES = True #@param {type:"boolean"}
OPTIONS['USE_GOOGLE_DRIVE'] = USE_GOOGLE_DRIVE
OPTIONS['UPDATE_COMFY_UI'] = UPDATE_COMFY_UI
OPTIONS['USE_COMFYUI_MANAGER'] = USE_COMFYUI_MANAGER
OPTIONS['INSTALL_CUSTOM_NODES_DEPENDENCIES'] = INSTALL_CUSTOM_NODES_DEPENDENCIES

current_dir = !pwd
WORKSPACE = f'{current_dir[0]}/ComfyUI'
```

## 4.1. Disable Google Drive Connection (Set USE\_GOOGLE\_DRIVE = "False")

Delete:

```
USE_GOOGLE_DRIVE = True #@param {type:"boolean"}
```

Paste:

```
USE_GOOGLE_DRIVE = False #@param {type:"boolean"}
```

## 4.2. Change Workspace Location (Set WORKSPACE = '~/ComfyUI')

Delete:

```
current_dir = !pwd
WORKSPACE = f'{current_dir[0]}/ComfyUI'
```

Paste:

```
WORKSPACE = '~/ComfyUI'
```

5. Make sure the code looks like this, save the notebook changes & run the cell

Git clone the repo and install the requirements. (ignore the pip errors about protobuf)

```
[1]: #@title Environment Setup

from pathlib import Path

OPTIONS = {}

USE_GOOGLE_DRIVE = False #@param {type:"boolean"}
UPDATE_COMFY_UI = True #@param {type:"boolean"}
USE_COMFYUI_MANAGER = True #@param {type:"boolean"}
INSTALL_CUSTOM_NODES_DEPENDENCIES = True #@param {type:"boolean"}
OPTIONS['USE_GOOGLE_DRIVE'] = USE_GOOGLE_DRIVE
OPTIONS['UPDATE_COMFY_UI'] = UPDATE_COMFY_UI
OPTIONS['USE_COMFYUI_MANAGER'] = USE_COMFYUI_MANAGER
OPTIONS['INSTALL_CUSTOM_NODES_DEPENDENCIES'] = INSTALL_CUSTOM_NODES_DEPENDENCIES

WORKSPACE = '~/ComfyUI'
```

## 6. Uncomment the models you want to install (delete the "#" in front of the lines) & run the cell

```
[ ]: # Checkpoints

### SDXL
### I recommend these workflow examples: https://comfyanonymous.github.io/ComfyUI\_examples/sdxl/

#!wget -c https://huggingface.co/stabilityai/stable-diffusion-xl-base-1.0/resolve/main/sd\_xl\_base\_1.0.safetensors -P ./models
#!wget -c https://huggingface.co/stabilityai/stable-diffusion-xl-refiner-1.0/resolve/main/sd\_xl\_refiner\_1.0.safetensors -P ./

# SDXL ReVision
#!wget -c https://huggingface.co/comfyanonymous/clip\_vision\_g/resolve/main/clip\_vision\_g.safetensors -P ./models/clip_vision/

# SD1.5
!wget -c https://huggingface.co/Comfy-0rg/stable-diffusion-v1-5-archive/resolve/main/v1-5-pruned-emaonly-fp16.safetensors -P

# SD2
#!wget -c https://huggingface.co/stabilityai/stable-diffusion-2-1-base/resolve/main/v2-1\_512-ema-pruned.safetensors -P ./mode
#!wget -c https://huggingface.co/stabilityai/stable-diffusion-2-1/resolve/main/v2-1\_768-ema-pruned.safetensors -P ./models/ch
```

## 7. Run the last cell "ComfyUI with cloudflared" and open ComfyUI in the browser

7.1. In the terminal code, search for the `URL to access ComfyUI` (`https://xxxx-xxxxx-xxxx.trycloudflare.com`) and copy it to your browser.

## 8. At end of use: stop your server (important)!

File > Hub Control Panel > Stop My ServerDeform Extension (Animation for SD): Installation

Tutorial recommendation: [Olivio Sarikas - Learn ComfyUI Playlist \(1 - 8\)](#)

# Installation: Deforum Stable Diffusion

## Installation

### Installing DSD locally on a Linux Device

#### 1. clone this repository:

```
git clone https://github.com/HelixNGC7293/DeforumStableDiffusionLocal.git
```

#### Creating the environment

#### 2. in case the environment should be available permanently (yes)

```
conda config --add envs_dirs /home/jovyan/.conda_envs
```

#### 3. create environment with conda

```
conda create --name dsd python=3.8.5 -y
```

#### 4. initialize bash shell

```
conda init bash
```

#### 5. restart shell

```
source ~/.bashrc
```

#### 6. activate environment:

```
conda activate dsd
```

# Downloading models

cd into models folder

```
cd models
```

Download model files

```
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/QJm0HoP5JqMYza/download -O sd-v1-4.ckpt  
wget --no-check-certificate https://th-koeln.sciebo.de/s/e9GIUImXPvTtJRP/download -O dpt_large-midas-2f21e586.pt
```

```
cd ..
```

```
cd pretrained
```

download adaBins

```
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/yYEhjskz9yuKotX/download -O AdaBins_nyu.pt
```

```
cd ..
```

Making the installations

```
cd DeforumStableDiffusionLocal
```

```
python setup.py
```

# Prompting the Model (Latest Stable Diffusion Weights)

These steps need to be executed in order to activate the environment we installed before

## initialize bash shell

```
conda init bash
```

## restart shell

```
source ~/.bashrc
```

## then:

```
conda activate dsd
```

generate still images:

```
python run.py --settings "./examples/runSettings_StillImages.txt"
```

animation:

```
python run.py --enable_animation_mode --settings "./examples/runSettings_Animation.txt"
```

## installation script

```
git clone https://github.com/HelixNGC7293/DeforumStableDiffusionLocal.git
conda config --add envs_dirs /home/jovyan/.conda_envs
conda create --name dsd python=3.8.5 -y
cd DeforumStableDiffusionLocal
cd models
wget #####insert adabins
wget --no-check-certificate --content-disposition https://th-koeln.sciebo.de/s/QJm0HoP5JqMYza/download -O sd-
v1-4.ckpt
wget --no-check-certificate https://th-koeln.sciebo.de/s/e9GIUImXPvTtJRP/download -O dpt_large-midas-
2f21e586.pt
```

```
cd ..  
conda init bash  
source ~/.bashrc  
conda activate dsd  
python setup.py
```

## Downloading entire folders

if you want to download an entire folder you need to zip it first:

```
zip -r example.zip original_folder
```

## Upscaling

[For upscaling please refer to the ESRGAN Book](#)

<https://github.com/xinntao/Real-ESRGAN>

-i INPUTPATH

-o OUTPUTPATH

-n MODEL

# Helpful Links

**a collection of different useful links**

**[Prompt search engine - find good prompts](#)**

**[prompt exploration](#)**

**[openAI Microscope -explore CLIP](#)**

**[Stable Diffusion Examples on Twitter](#)**