# Introduction

Welcome to this comprehensive guide on how to set up Stable Diffusion, a powerful AI tool that can generate stunning AI art from text prompts. This guide is designed for beginners who are new to Stable Diffusion and want to install it on their computers.

Stable Diffusion is a text-to-image AI model that has been updated multiple times over the past few months, receiving a lot of new features. It's a great tool for creating AI art, and the best part is that it's free to install and use on your PC. However, it's important to note that you need at least 4GB of VRAM to run it properly on your machine.

# Prerequisites

Before we start the installation of Stable Diffusion, you need a few things:

1. Make sure that you are using Windows and have an Nvidia card. Otherwise, this installation will not work for you. If you have an Apple computer or Linux, or if you have an AMD GPU, there are other guides available for those setups.

2. You need to install two things: Python and Git. For Python, make sure that you're downloading the 3.10.6 version because Stable Diffusion might not work if you use a newer version. You can download Python from [here](https://www.python.org/downloads/release/python-3106/). For Git, you can download it from [here](https://git-scm.com/download/win).

# Installation Steps

1. \*\*Install Python\*\*: Double click on the Python EXE file. Don't forget to click 'Add Python 3.10 to PATH' and then click 'Install Now'. This will start installing Python on your computer.

2. \*\*Install Git\*\*: Double click on the Git EXE file to start the installation. In the setup menu, keep clicking 'Next'. For the default editor, you can choose Notepad++. Keep clicking 'Next' until Git is installed and then click on 'Finish'.

3. \*\*Create a New Folder\*\*: Create a new folder where you're going to put Stable Diffusion. It's recommended to create a folder without any spaces because this can be a source of issue later on.

4. \*\*Open Command Prompt\*\*: Click on the folder URL, type CMD, and then press enter. This will bring up the command prompt window.

5. \*\*Clone the Repository\*\*: Inside the command prompt window, copy and paste the following command: `git clone https://github.com/AUTOMATIC1111/stable-diffusion-webui.git` and then press enter. This command will create a new folder called 'stable-diffusion-webui'.

6. \*\*Download Stable Diffusion Models\*\*: To be able to use Stable Diffusion, you need to download Stable Diffusion models. There are a lot of models to choose from, even if you only count the official ones. For beginners, it's recommended to download the 1.4, 1.5, and the special Stable Diffusion inpainting model. These models are easy to use and there are plenty of examples available online for you to take inspiration from. You can download these models from the following links: [SD 1.4](https://huggingface.co/CompVis/stable-diffusion-v-1-4-original), [SD 1.5](https://huggingface.co/runwayml/stable-diffusion-v1-5), [SD 1.5 inpainting](https://huggingface.co/runwayml/stable-diffusion-inpainting).

7. \*\*Move the Models to the Correct Folder\*\*: Once you've downloaded the models, cut and paste them into the 'models/stable-diffusion' folder inside the 'stable-diffusion-webui' folder.

8. \*\*Edit the Batch File\*\*: Before launching Stable Diffusion, it's recommended to edit the 'webui\_user.bat' file to avoid potential issues. Right-click on the file and select 'Edit with Notepad'. In your start menu, type 'Python' and click on 'Open file location'. Right-click again and open the file location again. You should see a similar folder. This is the folder where you installed Python. Right-click on 'python.exe' and click on 'Copy as path'. Go back to your Notepad and after 'set python=', paste the path. Click on 'Save'.

9. \*\*Launch Stable Diffusion\*\*: Double click on the 'webui\_user.bat' file. This will start the final installation of Stable Diffusion. This process can take a while, so be patient.

10. \*\*Access Stable Diffusion\*\*: Once the installation is complete, you'll see a local URL in the command prompt. Copy this URL and paste it into your web browser. Now you have Stable Diffusion running on your computer.

11. \*\*Generate AI Art\*\*: To generate AI art, go to your Stable Diffusion checkpoint, select the model that you want, write your prompt, choose your sampler, the number of steps, CG scale, and then click on 'Generate'.

# Updating Stable Diffusion

When it comes to updating Stable Diffusion, there are two methods: the manual way and the automatic way.

- \*\*Manual Update\*\*: Open the command prompt in the 'stable-diffusion-webui' folder and type 'git pull' and press enter. This will download the latest version of Stable Diffusion Web UI.

- \*\*Automatic Update\*\*: Right-click on the 'webui\_user.bat' file, click on 'Edit with Notepad', and type 'git pull' just above 'call webui.bat'. Save the file. Now, each time you launch Stable Diffusion, it will update automatically.

# Conclusion

Congratulations! You should now have Stable Diffusion installed on your computer. You're finally ready to make some amazing AI art in only a few seconds. If you encounter any issues during the installation process, there's an [FAQ](https://rentry.org/SD\_help\_FAQ) available that should answer most of your installation problems. If you still can't find your issue, you can join the [Discord server](https://discord.gg/3ErYSdyUPt) where the community could potentially help you. Now, get out there and make some cool AI art!