Installation Guide

GPU & cuda for LLM

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Step 1: Compatibility

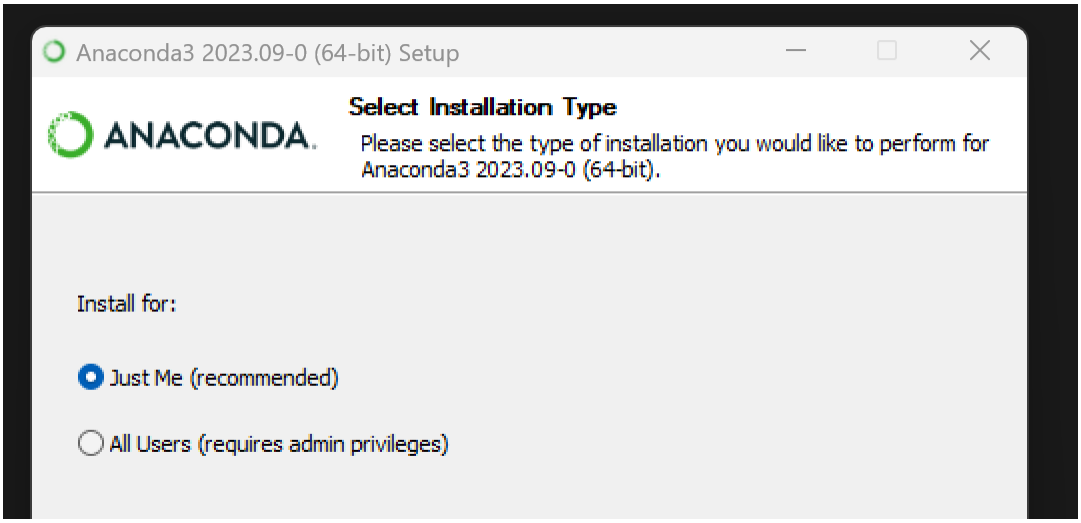
Check GPU Compatibility in below link

https://developer.nvidia.com/cuda-gpus

Step 2: Install Anaconda

Download link:

https://www.anaconda.com/download



Choose “Just me” or else it causes issue with path mapping after env creation.

Allow it to save path whenever it asks.

Step 2: conda env

Create a conda environment. Use python version = 3.10

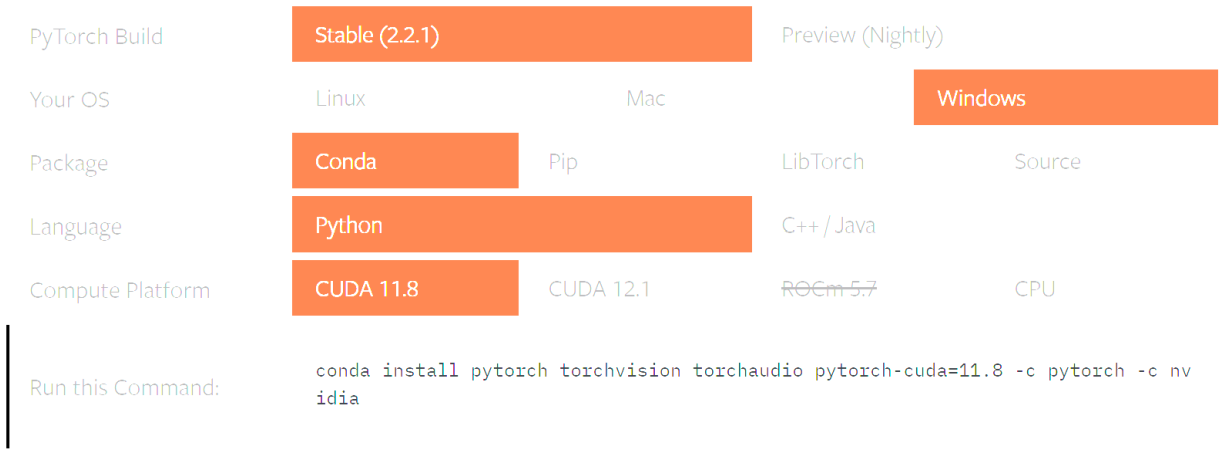
I had the least problems with “3.10” later versions are not compatible with many modules as of now.

```
conda create -n yourenvname python=3.10
```

Step 3: Pytorch

Go to below page and install run the generated installation query in the conda env/ prompt. Use : Version 11.8

https://pytorch.org/get-started/locally/



Step 4: Install cuda

https://developer.nvidia.com/cuda-11-8-0-download-archive

https://developer.nvidia.com/cuda-11-8-0-download-archive?target_os=Windows&target_arch=x86_64&target_version=11&target_type=exe_local

Step 5: Install cuDNN

This might require you to have a Nvidia account for your graphic card. It didn't ask me for account when I tried to access the link this time.

https://developer.nvidia.com/cudnn-downloads?target_os=Windows&target_arch=x86_64&target_version=10&target_type=exe_local

In One of the tutorials, it is asked to add some paths to environment variables. I didn't add them and cuda seems to work fine for me. If any issues please watch the last youtube link in the reference.

Step 6: Verify Installations:

In conda env cmd prompt:

nvcc –version

in python or ipynb file with env:

import torch

Step 7: Install required libraries

Install the libraries in the conda prompt or after activating the conda cmd prompt in the Visual studio.

Try running the below attached file and install all dependencies as required.

fineTuning.py

References:

https://www.youtube.com/watch?v=pPStdjuYzSI

https://medium.com/@lucsiecker/how-i-enable-my-cuda-capable-graphics-card-for-machine-learning-windows-10-11-b27a4beee326

https://www.youtube.com/watch?v=StH5YNrY0mE