

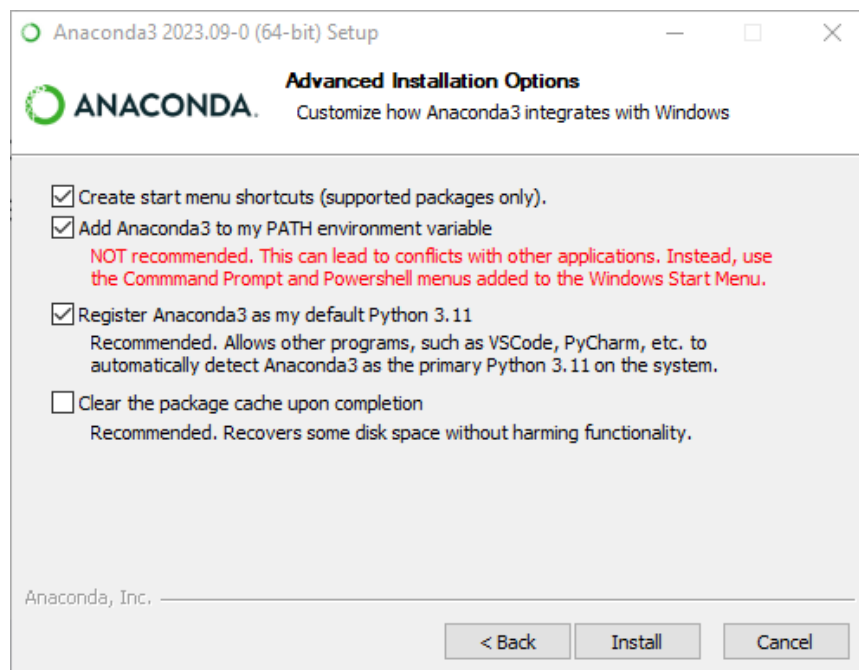
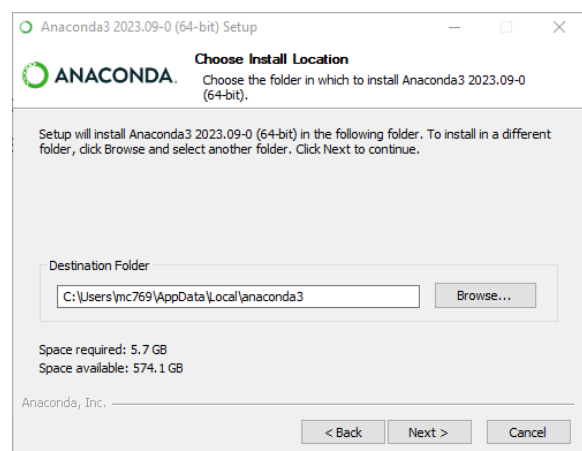
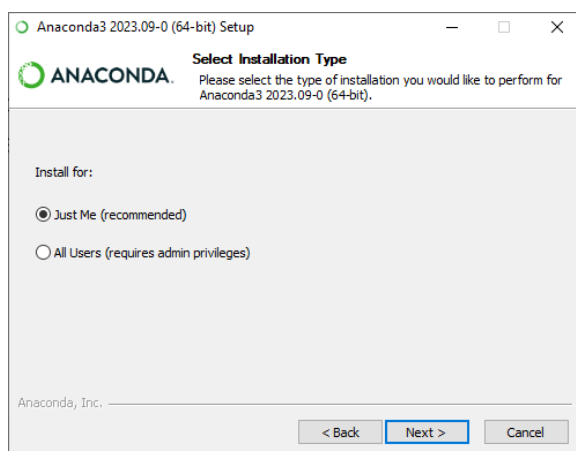
How to use the GPU in lab computers

If you have any questions, is stuck on something or noticed a mistake in this doc let me know!



email: mc769@sussex.ac.uk | discord: unsafe

1. Downloading Anaconda

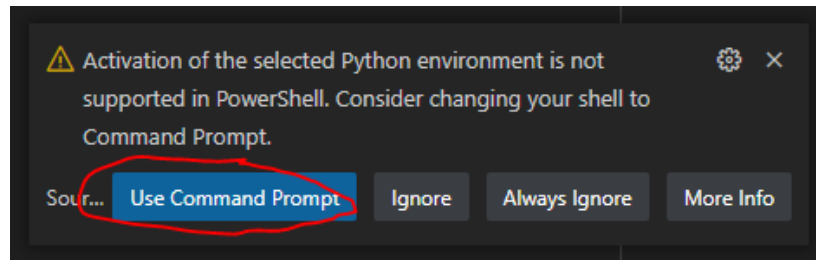


Make sure you do this part correctly or else you need to reinstall it again!!

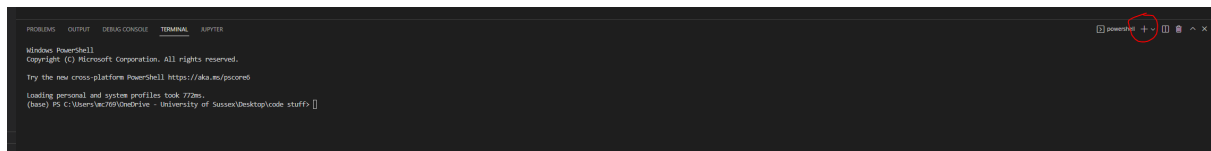
2. Creating an anaconda environment

Now open visual studio code

Go to Terminal → New Terminal



Click Use Command Prompt. Even if you don't get this box, don't worry!



It should look like this. Click on the v next to the + and pick Command Prompt

(Don't worry too much about the directory path 🐱)



Now it should look like this.

Type this in the terminal to create a conda environment:

```
conda create --name myGPUenv python=3.11
# when it asks to proceed, press y
```

You can change the name and python version if needed, but make sure it is compatible with the CUDA version you are trying to install!! (As of 2023 Oct, it doesn't support 3.12)

Type this in the terminal to enter the conda environment:

```
conda activate myGPUenv
```

```
(myGPUenv) C:\Users\mc769\OneDrive - University of Sussex\Desktop\code stuff>
```

It should look like this now, with your environment's name at the front. This is how you know it's working 😊

3. Installing PyTorch and CUDA

Type this in the terminal to install torch and cuda:

```
pip install torch==2.0+cu117 -f https://download.pytorch.org/whl/cu117/torch_stable.html
```

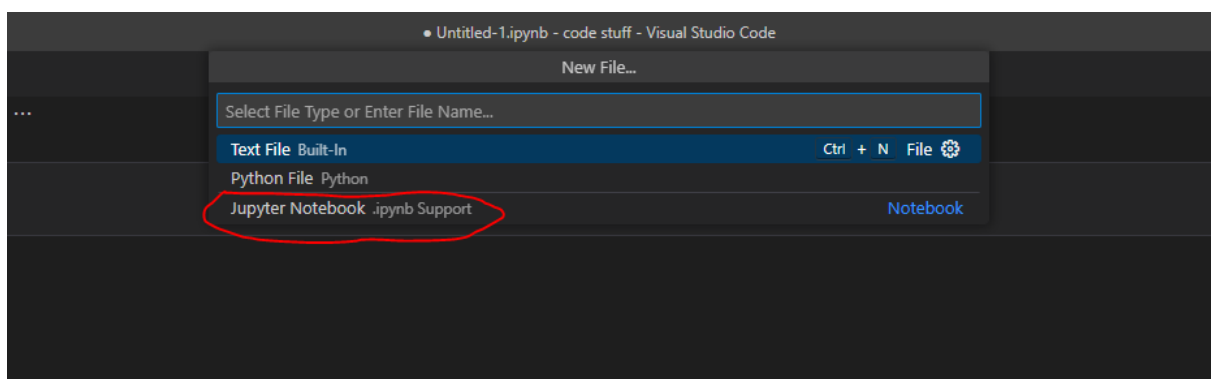
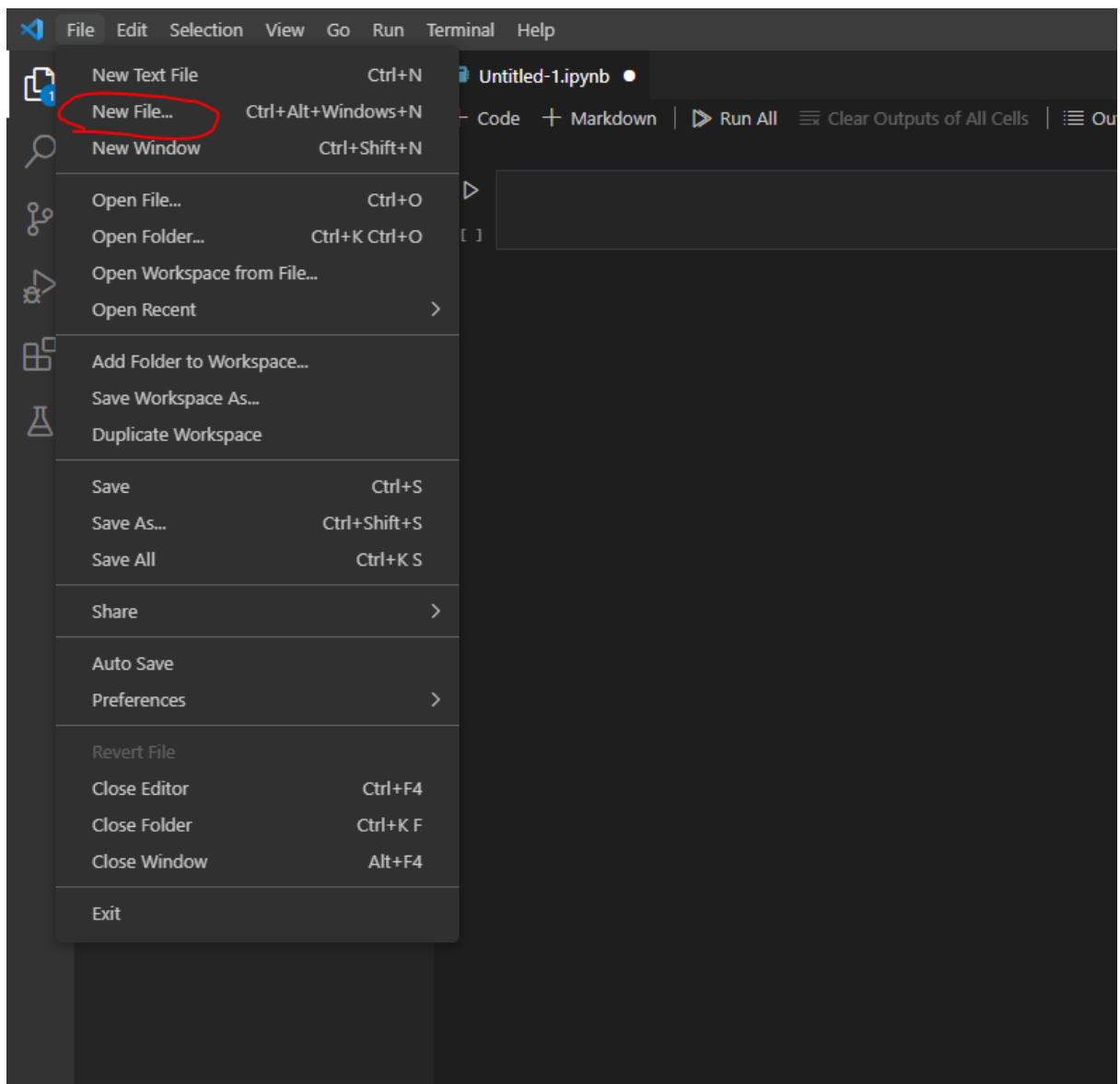
Optionally, you can also go to the official page or visit the page down below to install other versions if needed.

<https://pytorch.org/get-started/previous-versions/>

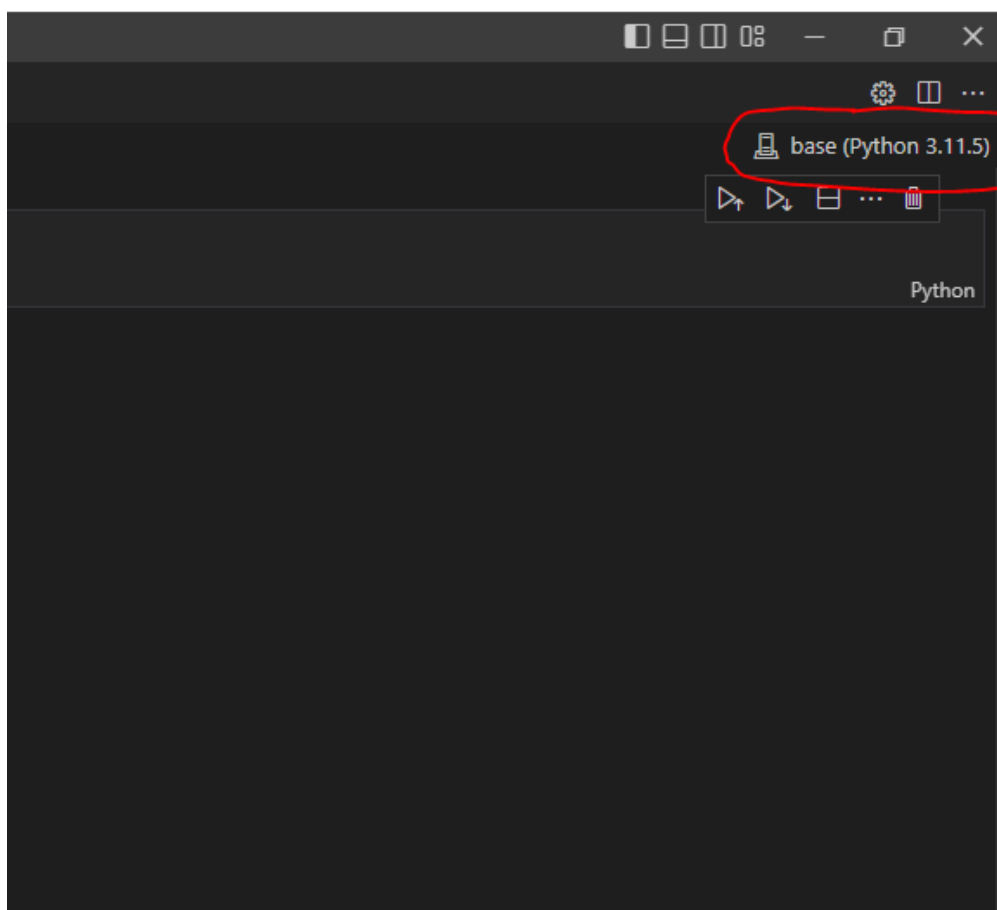
When it's done downloading, reload the window and you can now switch to the environment to run code with your GPU!

If you don't know how, follow this guide. If it asks you to install extensions (python, ipykernel) just say yes:

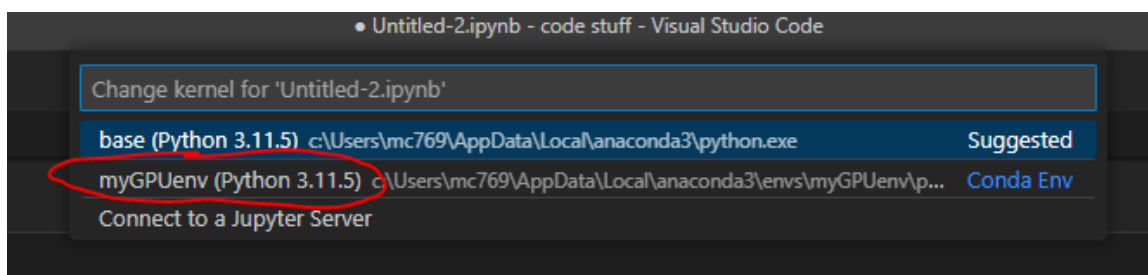
Make a new file



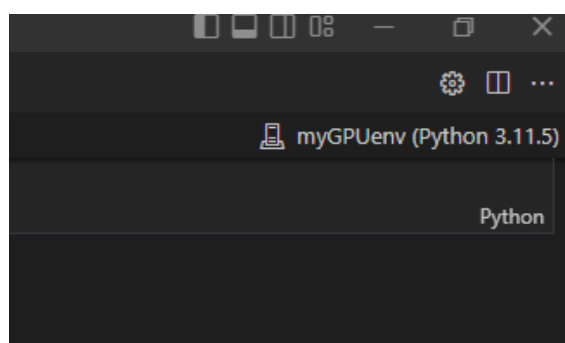
pick a jupyter notebook to make things easy (install whatever pops up on bottom right)



click on base (Python...) on the top right corner



pick your conda environment. If this doesn't show up, Ctrl+Shift+P and search for reload window!



Now it should look like this instead of base.

4. Testing if everything works as expected...

Now we will test the GPU connection.

You could either run this code in your visual studio code:

```
import torch
if torch.cuda.is_available(): print('Connected GPU',torch.cuda.get_device_name())
else: print('No GPU connected')
# this should return "Connected GPU NVIDIA RTX A4000" (or whichever other graphics card you are using.)
```

Or you can open the python IDE and type:

```
python
import torch
torch.cuda.is_available() # this should return true
torch.cuda.get_device_name() # this should return your graphics card name. Ex) 'NVIDIA RTX A4000'
```