GPU Training

1. Install GPU Drivers:

For NVIDIA GPUs, download and install the latest drivers from the official NVIDIA website: NVIDIA Drivers

https://www.nvidia.com/Download/index.aspx

2. Install CUDA Toolkit (NVIDIA GPUs):

Download and install the CUDA Toolkit from the NVIDIA CUDA Toolkit download page: CUDA Toolkit

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

3. Install cuDNN (NVIDIA GPUs):

Download cuDNN from the NVIDIA cuDNN download page: cuDNN

https://developer.nvidia.com/cudnn

Follow the installation instructions provided in the cuDNN documentation.

4. Install Deep Learning Framework:

For TensorFlow:

Open a command prompt or PowerShell window and run the following command:

pip install tensorflow-gpu

5. Verify GPU Availability:

Open a Python environment (e.g., Python interpreter or Jupyter notebook) and run the following code to check if your GPU is detected:

import tensorflow as tf

print("Num GPUs Available: ", len(tf.config.experimental.list\_physical\_devices('GPU')))

6. Set up your Deep Learning Environment:

If you're using TensorFlow, you may want to set GPU memory growth. Add the following code to your script or notebook:

import tensorflow as tf

# Set GPU memory growth for TensorFlow

gpus = tf.config.experimental.list\_physical\_devices('GPU')

if gpus:

try:

for gpu in gpus:

tf.config.experimental.set\_memory\_growth(gpu, True)

except RuntimeError as e:

print(e)