1. Clone/download from the <https://github.com/MarShao0124/graphcast_fine_tuning.git>

Original: <https://github.com/NVIDIA/physicsnemo>

1. open terminal, change the location of the files, where you cloned the folder

“cd Your/path/to/cloned\_repository”

1. open terminal in docker and enter

“docker build -t graphcast .”

1. open VS Code, open folder of the following path: Path/to/ cloned\_repository
2. run

“docker run --gpus all -it -v ${PWD}:/workspace graphcast /bin/bash”

to access docker terminal with gpu

1. run the following command in docker terminal to open the editor

“nano /root/.cdsapirc”

Paste the following api key from the cds <https://cds.climate.copernicus.eu/> (need to create an account and then go to profile, you will found the your own key for api and remember to enable the [licences](https://cds.climate.copernicus.eu/profile?tab=licences))

“url: https://cds.climate.copernicus.eu/api

key: ”

Save and exit the editor Ctrl+O, Enter, then Ctrl+X for nano

1. run following command to install addition dependencies

“pip install -r /workspace/dataset\_download/requirements.txt”

“pip install -r /workspace/graphcast/requirements.txt”

1. Download data edit the the /workspace/dataset\_download/conf/config\_34var.yaml and see the code in start\_mirror.py line 50, uncomment the code

to download required data date range for training.

“python /workspace/dataset\_download/start\_mirror.py”

1. Compute the std and mean

“python /workspace/graphcast/simple\_time\_diff\_std.py”

1. In the folder hdf5\_data, create 2 folders, “test” and “out\_of\_sample”, duplicate the .h5 file into the 2 new folders to test if the training works.

python /workspace/graphcast/train\_graphcast.py