Start interactive session on CHPC GPU node

- Login to lengau.chpc.ac.za with studentXX and supplied password with PuTTY (Type in Host Name and hit "Open"button)
- qsub -I -P WCHPC -W group_list=training -q R1892401 -l ncpus=10:ngpus=1

Note: the above is one line, ignore wrapping (the first –I is a capital "i" while the second –l is a lower case "l" as in "lego")

Queue 1892401 is for 1 or 2 gpus (set ngpus=1 or ngpus=2)

Queue 1892403 is for 4 gpus (set ngpus=4)

(scale ncpus as appropriate)

After about 30 seconds, you will be at a command prompt on a GPU node

Setup and start Jupyter notebooks

- Go to CHPC WIKI (Google "chpc wiki"). On the wiki, search for "jupyter" and follow link
- Note1: module load chpc/python/anaconda/3

Instead of the module listed

- Note2: use "jupyter notebook" wherever you see "jupyter-notebook"

- Follow instructions to setup password (do this ONCE only!)
- Ignore the advise for tunneling port with SSH unless you are using Mac/Linux
- Note the hostname you are running on, ie. look at the name in the prompt after the @ sign
- Start jupyter notebook using the command (do NOT use qsub script!)

jupyter notebook --port=YYYY --no-browser

where YYYY is a positive integer you randomly choose between 8000 and 49000

Tunneling Jupyter NB with PuTTY

- Open a new PuTTY session (leave the original one open)
- Hostname: lengau.chpc.ac.za
- Before opening, connection
  - Go to Category: Connection -> SSH -> Tunnels
  - Source port: 8080, Destination: localhost:YYYY
  - Click "Add"
- Click "open" to connect to lengau and enter studentXX and password as before
- On Lengau, execute the following command

ssh -N -L YYYY:localhost:YYYY hostname

Where "hostname" replaced by hostname you noted previously

This window needs to remain open; nothing will happen but your tunnel has been configured

Now, you can access Jupyter Notebook from your LOCAL browser by going to the address
https://localhost:8080

Where are the files?

- Challenge files are in:

/mnt/lustre/groups/IndabaX/IBM

/mnt/lustre/groups/IndabaX/Aerobotics

/mnt/lustre/groups/IndabaX/Isazi_Consulting

Use these from their location; do not copy to your home directory (/home/studentXX) as this is SLOW