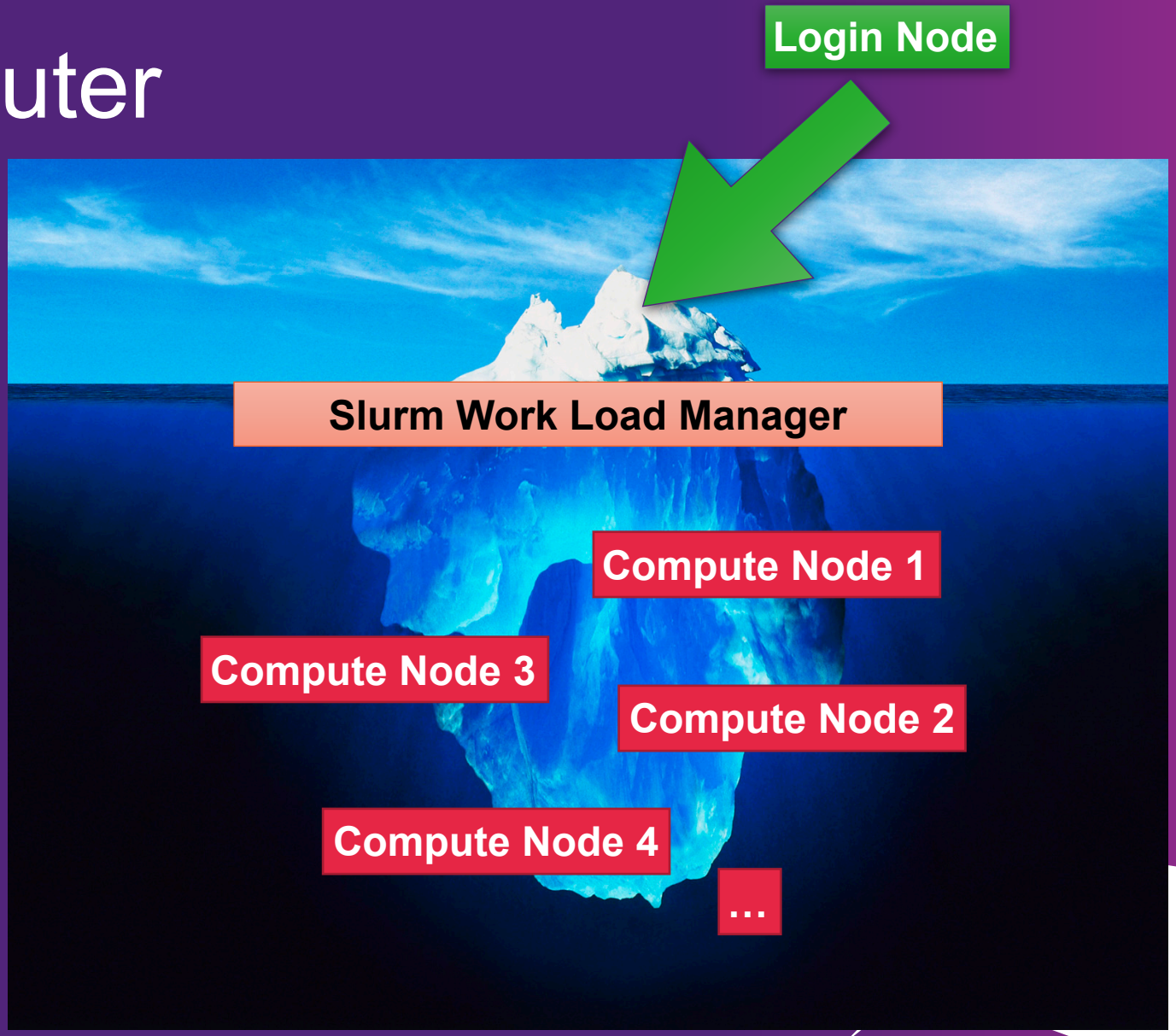
HPC - Super Computer

- Many (server grade) computers put together

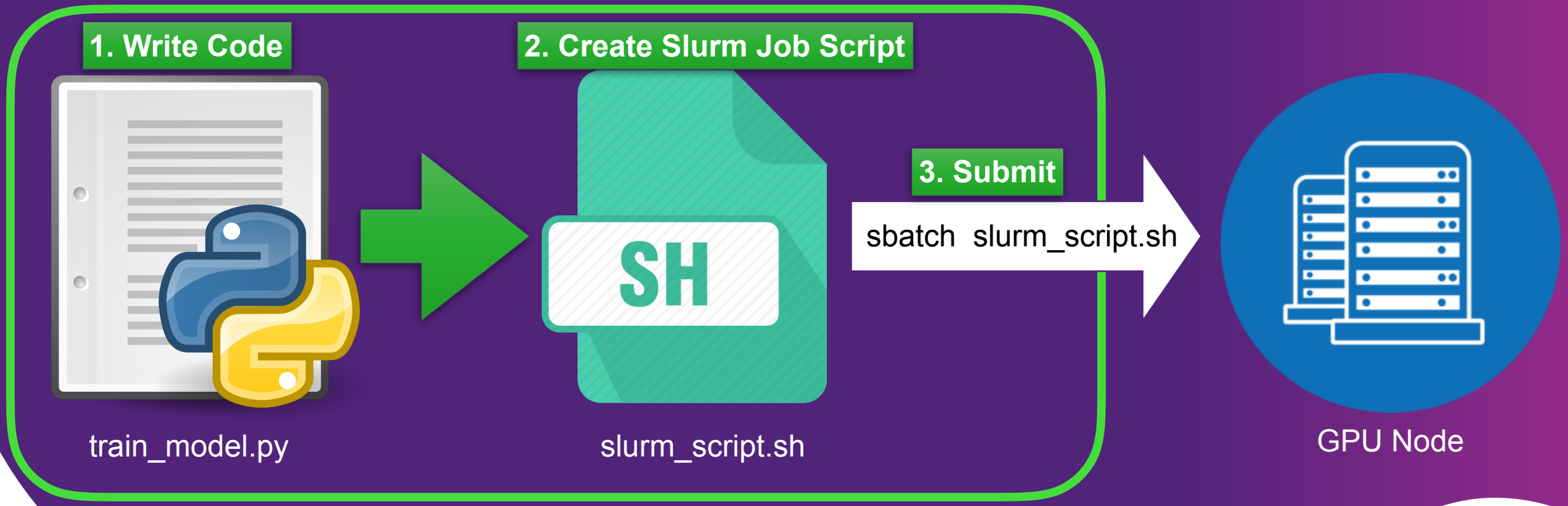


EAIT Cluster - Goliath

- SSH s1234567@rangpur.compute.eait.uq.edu.au
- Linux Command Line Interface
- Need VPN outside of UQ
- Nvidia K-40m 12 GB, Nvidia K-80 12 GB & Nvidia P100 16 GB
- Use login node for light weight tasks (moving files, writing code…)

- **NEVER EVER train on login node**

Slurm - 3 Main Steps



Slurm Job Script

slurm_script.sh

```
#!/bin/bash
time=0-00:30:00
#SBATCH --nodes=1
#SBATCH --ntasks-per-node=1
#SBATCH --gres=gpu:1
#SBATCH --partition=gpu
#SBATCH --job-name="name"
#SBATCH --mail-user=your@email.com
#SBATCH --mail-type=BEGIN
#SBATCH --mail-type=END
#SBATCH --mail-type=FAIL
#SBATCH –output=output_dir/%j.out

module load tensorflow/1.9.0
export PYTHONPATH=~/.local/lib/
python3.6/site-packages/
python train_model.py
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Link packages installed through “pip install —user package-name”

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- **Too lazy to make your own? Use a job script generator:** https://www.hpc.iastate.edu/guides/classroom-hpc-cluster/slurm-job-script-generator

Slurm - Important Notes

- Do not hog resources (CPUs, GPUs & RAM)
    - Expect angry emails from other users &
    - Infinite queue time.
- Alway set a reasonable time limit (<= 1 day), else
    - Expect angry emails from other users.
- Inspect your submitted jobs & job ids.

```
squeue –u user_name
```

- Cancel your submitted jobs.

```
scancel job_id
```