

Requirements for the exercises

Deep Learning – part2

<https://fs.hlr.de/projects/par/events/2023/sst/commands-part2.txt>

- Access your course account on Vulcan
 - > ssh username@vulcan.hww.hlr.de
- Recover **your** workspace
 - > ws_list
 - > MYSCR = \$(ws_find wspart2)
 - > cd \$MYSCR (if **ws** path is stored) **or**
 - > cd /lustre/nec/ws3/ws/username/**wspart2**

Requirements for the exercises

Deep Learning – part2

- Copy to your workspace:
 - > `cp -r /lustre/nec/ws3/ws/hpckkakh-exchangews/wsdays2/*.tar.gz ./`
- In **your ws** directory unpack all ***.tar.gz** archives:
 - > `tar -zxvf data.tar.gz`
 - > `tar -zxvf work_data_50.tar.gz`
 - > `tar -zxvf notebooks.tar.gz`



DONE!

Requirements for the exercises

- **data** - for Litter classification (*.json & co)
- **work_data_50** - image data as numpy array
- **notebooks** - tutorial exercises
- **solutions** (you wont need hopefully)

[*] <http://tacodataset.org> (dataset)

Requirements for the exercises

Options to work on exercises:

- **Jupyter Notebook**
- **and/or**
- **Job scheduler** in terminal

Requirements for the exercises

To work with **Jupyter notebook**

- Open a **second** terminal window

- Connect Vulcan via **ssh** again:

```
> ssh username@vulcan.hww.hlrs.de -q -D 8080
```

Requirements for the exercises

To work with Jupyter notebook

- Reserve computing time:

Max: until 18:00 CEST

```
> qsub -I -q R_sst -l select=1:node_type=hsw:mem=100gb,walltime=05:00:00
```

- Navigate to the workspace:

Special
prompt of
interactive
batch job

```
s12345 n011101 000$ ws_list
```

```
MYSCR = $(ws_find wspart2)
```

```
> cd $MYSCR (if ws path is stored/full path for wspart2)
```

(please check that you are in your workspace!)

Requirements for the exercises

To work with **Jupyter notebook** on **compute node** &

- Initialize your HPC working environment in your **ws**:

> `. notebooks/modules.sh`

- To access the notebook, **copy URL**:

> `http://n110010:8888/?token=...`

See next slide

Requirements for the exercises

To work with **Jupyter notebook**

- Launch browser **profiles** from the page “**about:profiles**”
- Choose **profile name** (i.e., Jupyter Notebook (JN))

“Launch profile in a new browser” or
“Profil zusätzlich ausführen”

- **Paste URL** in a JN browser profile:

<http://n110010:8888/?token=...>

You shall see in your browser



jupyter

Files

Running

Clusters

Select items to perform actions on them.

0 /

notebooks

data.tar.gz

work_data_50.tar.gz

Requirements for the exercises

To work in **terminal** & HPC environment

> **cd notebooks**

• Submit job:

> **qsub job_test.pbs**



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• Check status:

> **qstat**

status of your job

> **qstat -q**

available queues

Requirements for the exercises

job_test.pbs

```
#!/bin/bash
#PBS -N test
#PBS -q R_sst
#PBS -l select=1:node_type=hsw
#PBS -l walltime=00:03:00
```

Directives

```
cd $PBS_O_WORKDIR
```

```
# Load modules
module load python/3.10
```

Loading software/API

```
...
type python
python test.py > test.out
```

User scripting

