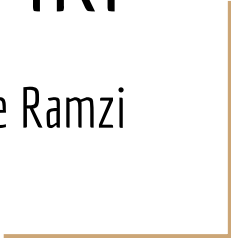


# Using Jean Zay for Deep Learning in MRI

Presentation by Zaccharie Ramzi  
10/09/2021





# How to access Jean Zay?

Procedure explained in 2 locations:

- [official doc](http://idris.fr/su/debutant.html) (idris.fr/su/debutant.html)
- [user doc](https://github.com/jean-zay-users/jean-zay-doc) (github.com/jean-zay-users/jean-zay-doc)

# How to ask questions about Jean Zay?

- Official channel: [assist@idris.fr](mailto:assist@idris.fr) . Very responsive, interactions have always been very satisfying: friendly and helpful.
- [Gitter chat](#) of the users doc, sort of informal forum about Jean Zay. People from the official Jean Zay support are even involved.

# What will Jean Zay bring to your scientific workflow?

Here I will focus on the GPU partitions of Jean Zay:

- Ability to test a wide **variety of configurations** for your experiments => better ablation studies, more exhaustive comparisons, more seeds
- Ability to use huge amount of large **GPUs** in parallel (Distributed Training)

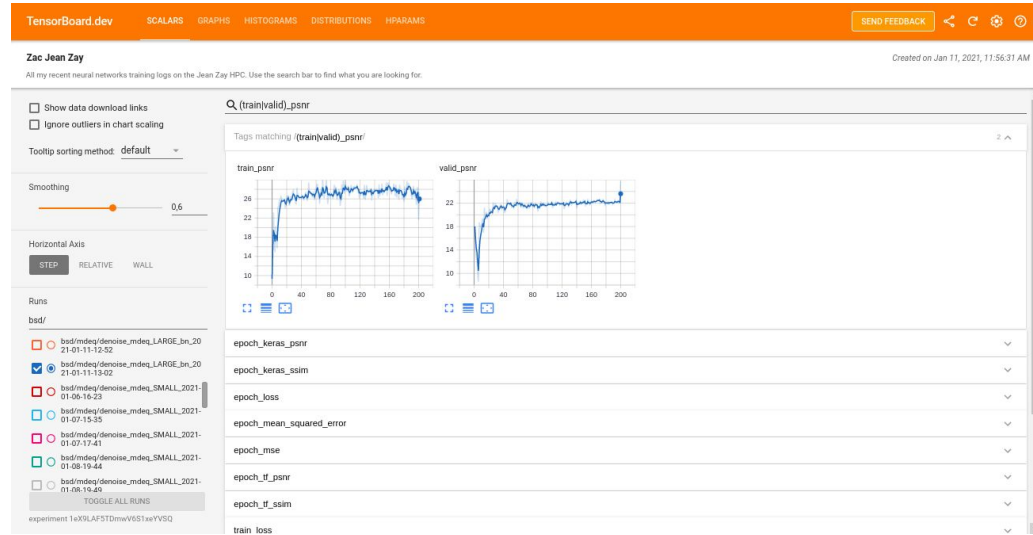
# Personal journey with Jean Zay

- **Previous experience with TGCC** (CEA supercomputer), where internet is overwhelmingly limited
- **Refactoring code** to stick with workload management system, **SLURM**
  - small tip: use [submitit](#) or [dask](#).
- Interactions with the **support team** for debugging
- A bit of **suffering** with:
  - regular maintenances
  - the `module` system
  - SLURM
  - checkpointing training



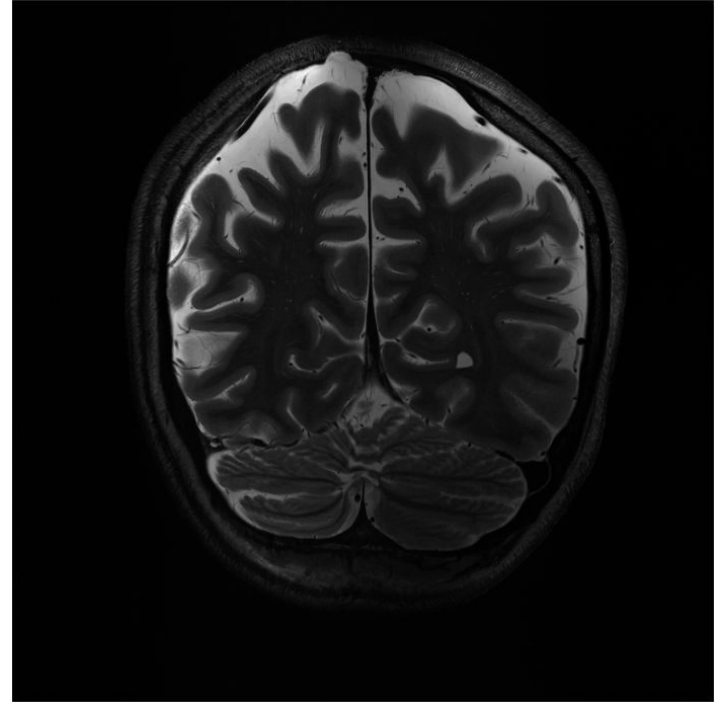
# A typical day with Jean Zay for Deep Learning

1. VPN activated and ssh to JZ
2. Survey the jobs that have been running (training, evaluation, inference), either with `squeue`, or `tensorboard-dev`, or TensorBoard
3. Debug/visualize using Jupyter notebooks
4. Adjust the code/ submission scripts and update the changes on JZ using git



# Jean Zay in my numbers

- 1.5 years of use
- 8 published works, 2 submitted, 2 in prep
- 2nd spot in the fastMRI challenge
- 80k GPU-hours consumed
- 30k GPU-hours for the current year
- Typical training time: a few days





Thank you for your attention!

# Resources for non-France-based researchers

- [PRACE calls](#) (Partnership for Advanced Computing in Europe)
- [Non-updated list on Wikipedia](#)