

IN2P3/IRFU Machine Learning workshop

16/17 March 2021
online

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IN2P3/Irfu ML workshops

- [Previous workshop Jan 2020](#) at CC Lyon: 2 days, 45 registered,
- This one [March 2021](#) by video, for obvious reasons. Limited to 2 mornings, 135 registered
 - Talks are 12'+3', not ideal, but speakers please stick to your time
- Next workshop hopefully on site fall 2021

Web site etc...

- At last workshop, we agreed to have a gitlab etc...
... but then we've all had other things to worry about
- ...would still be a very useful thing to have

IntheArt



Machine Learning in CEA-DRF

Idea of the group:

- share the knowledge,
- discuss and work together, through an open group.

Participation: CEA, CNRS, Paris-Saclay univ.



Not only CEA people, your participation is more than welcome !

Send me an email: valerie.gautard@cea.fr

IntheArt

Seminars



- Biology
- Physics
- Chemistry
- Mathematic, Machine learning

Trainings

- ▶ Machine Learning
- ▶ Deep learning
- ▶ GAN

Research project

- ▶ PhD thesis
 - Artificial Intelligence for a gamma-detector for high resolution PET imaging (*dir. V. Sharyy, IRFU*)
- ▶ Various topics like climate, neurobiology...



Workshops

- <https://indico.in2p3.fr/event/17858/page/2465-workshop>
- March 16-17 : Machine Learning Workshop

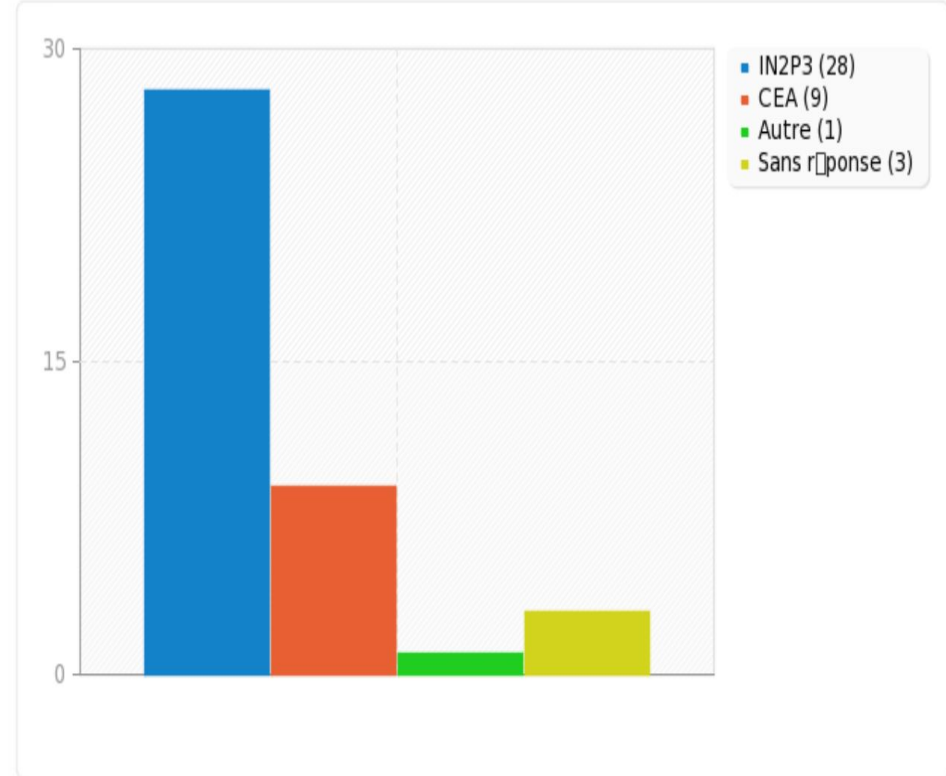
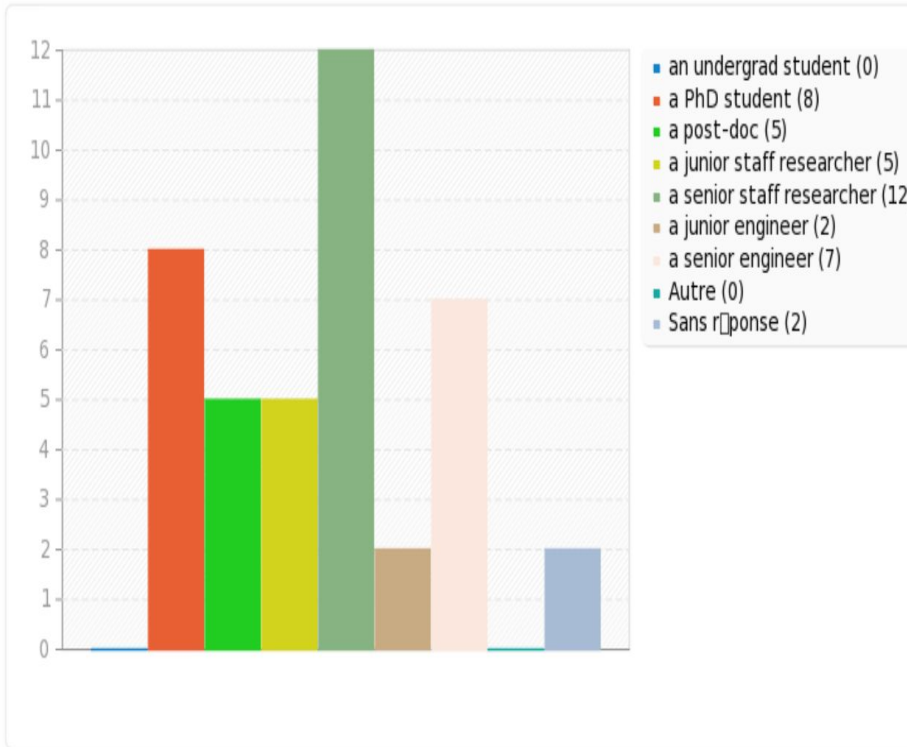
Web site:

<https://indico.in2p3.fr/event/17858/page/1967-intheart>

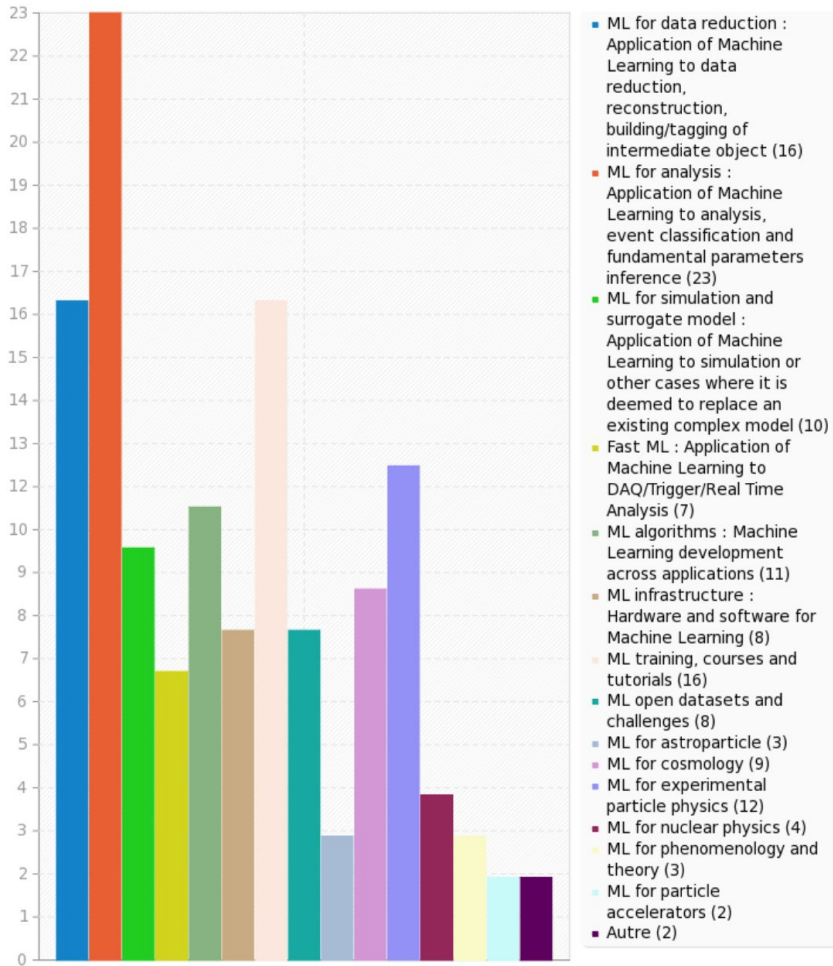
CNRS/IN2P3 Machine Learning project

- 15k€ in 2021 (2020 money was essentially sent back for obvious reasons)
- Overall goal is to favour development of ML at IN2P3
- Challenges
- Tutorial (but manpower ?), see Reprises
- Sending physicists to ML conference
- Also favour collaboration with ML scientists (or ML student, co- tutelle for example)
- Inviting a ML scientist to a lab (or to CERN, for example)
- Sending ML scientist to physics conference
- If you have such projects send me a mail
- Need some FTE fraction in NSIP
- Use MACHINE-LEARNING-L@in2p3.fr to stay up to date

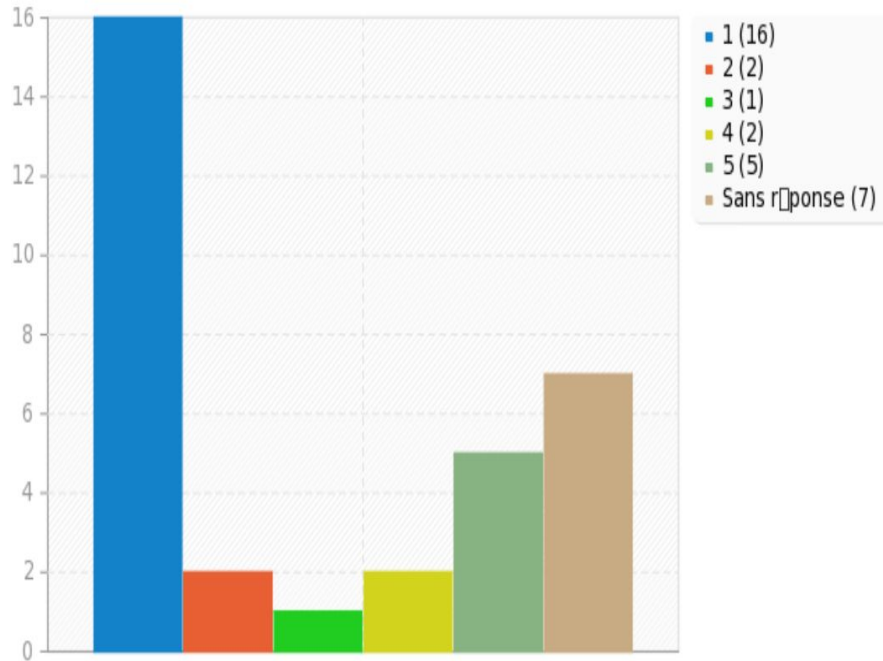
Machine Learning survey :position



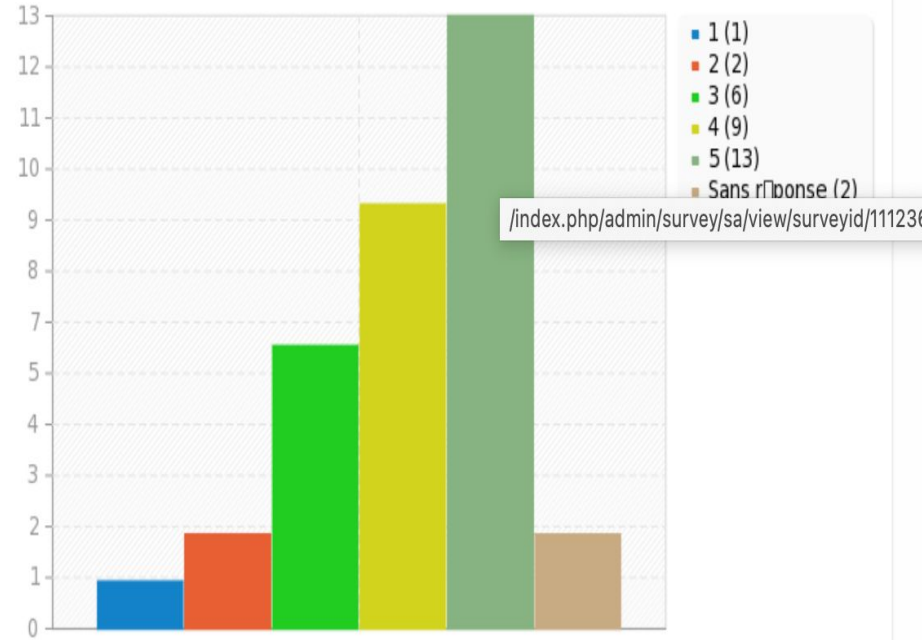
Current field of interest : quite diverse!



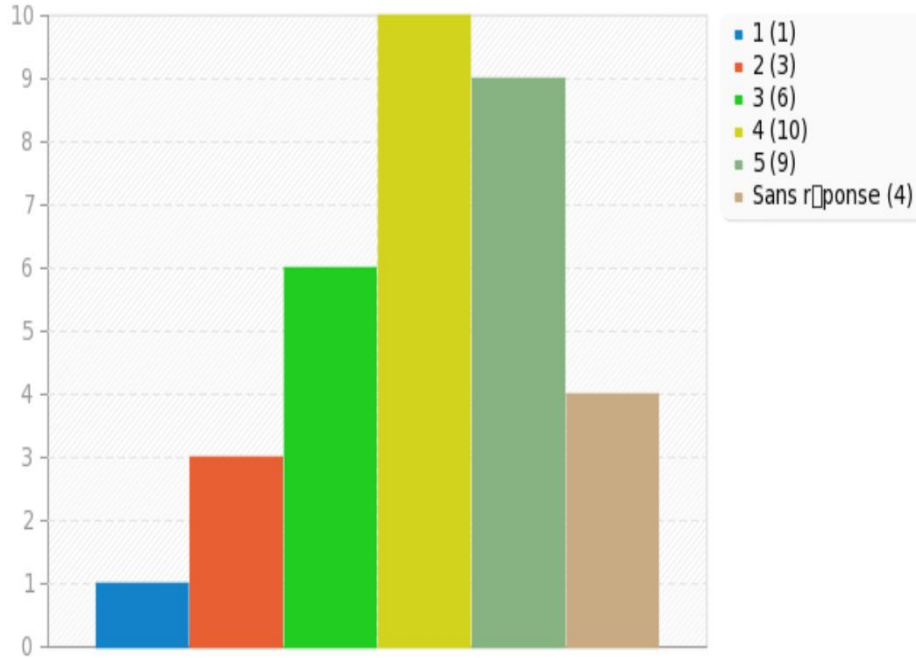
BDT TMVA expertise



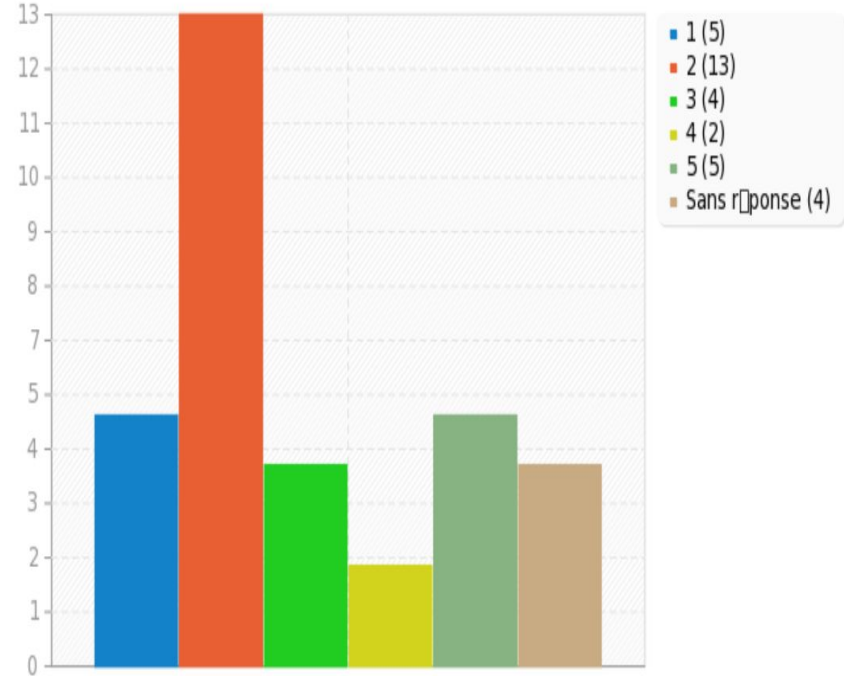
matplotlib expertise



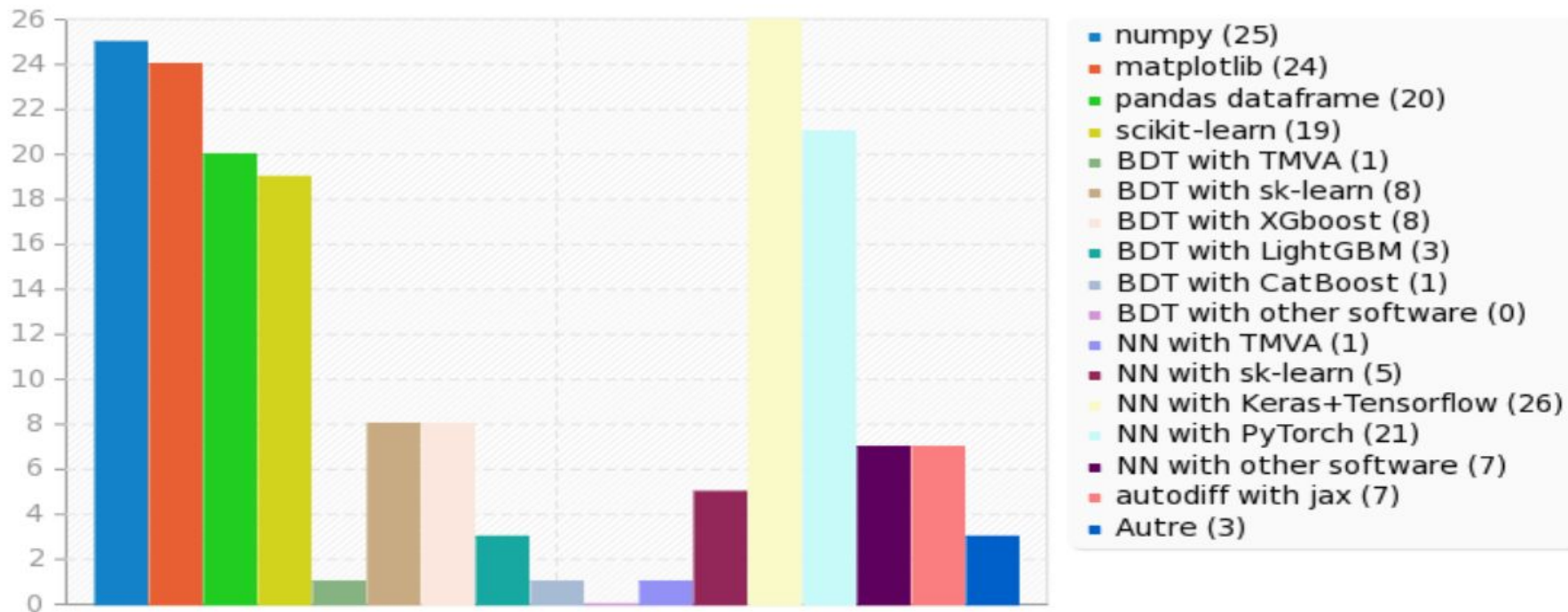
tensorflow exp.



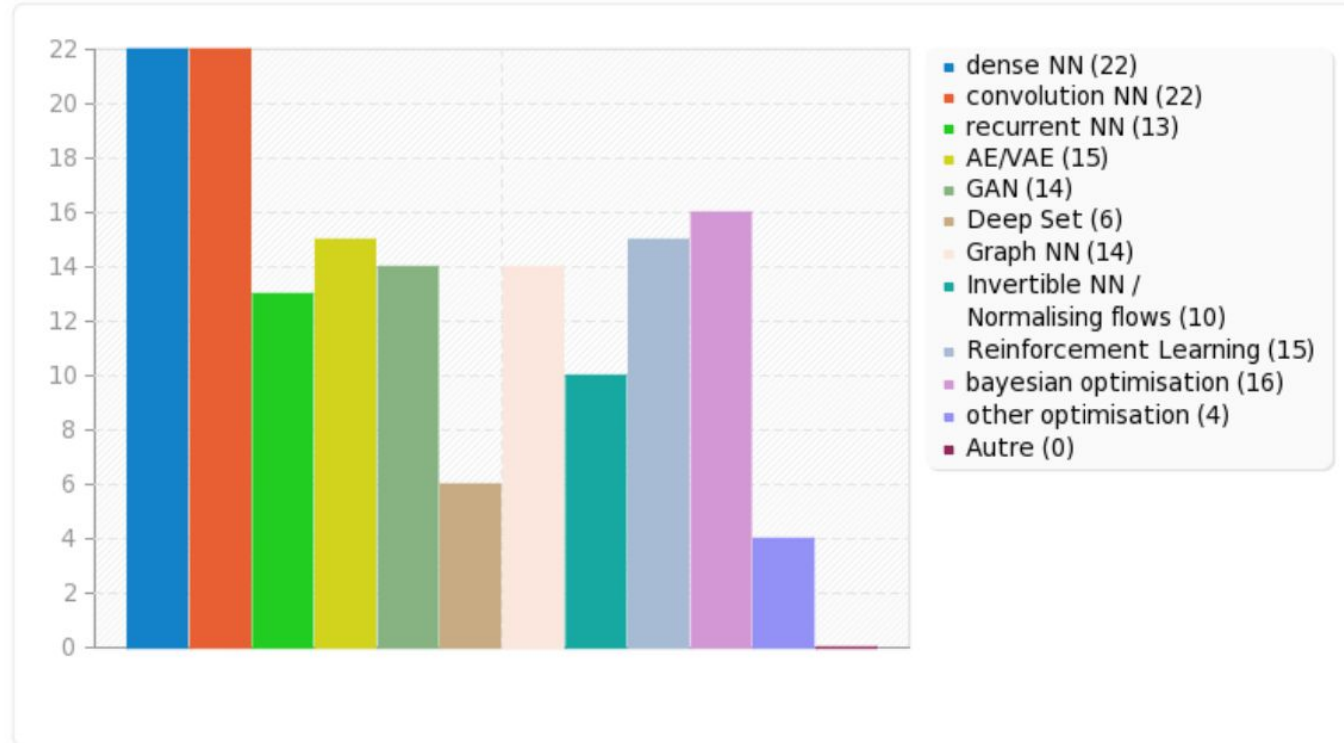
pytorch exp.



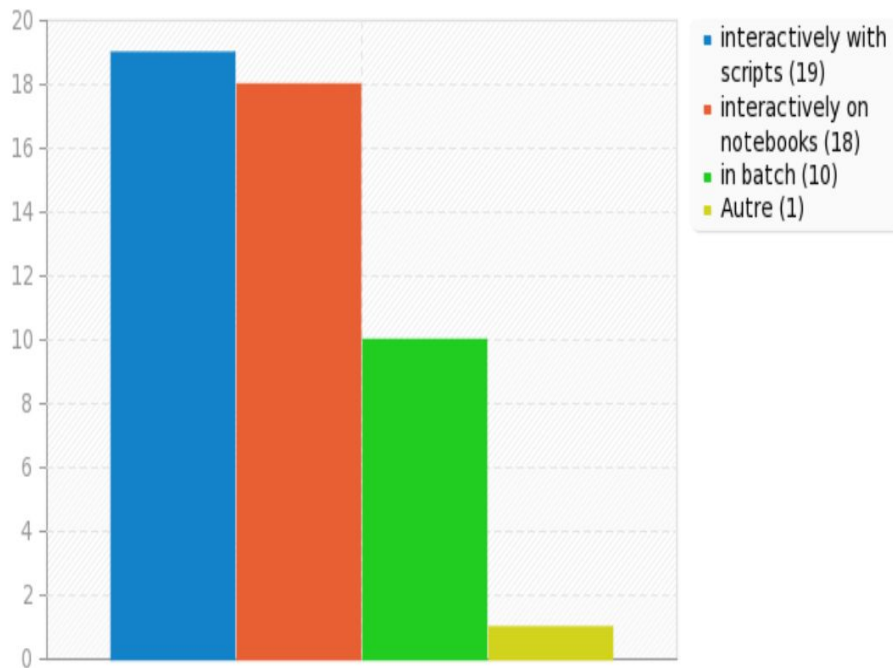
Will look into these techniques :



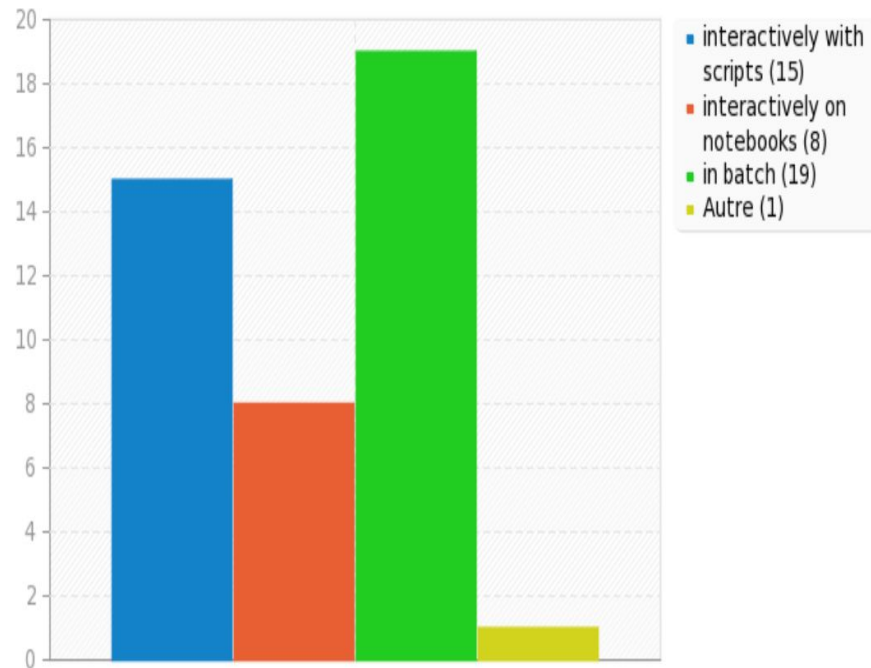
Will look into these concepts/architectures :



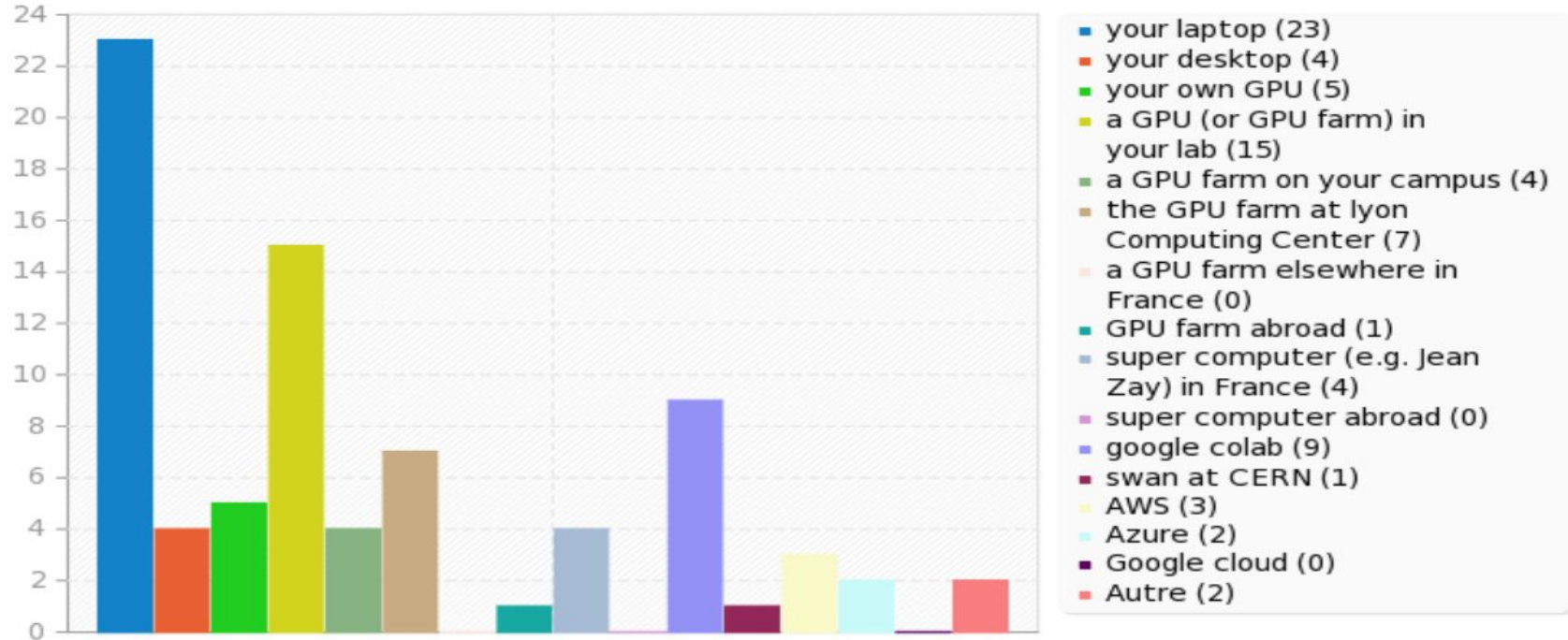
ML development



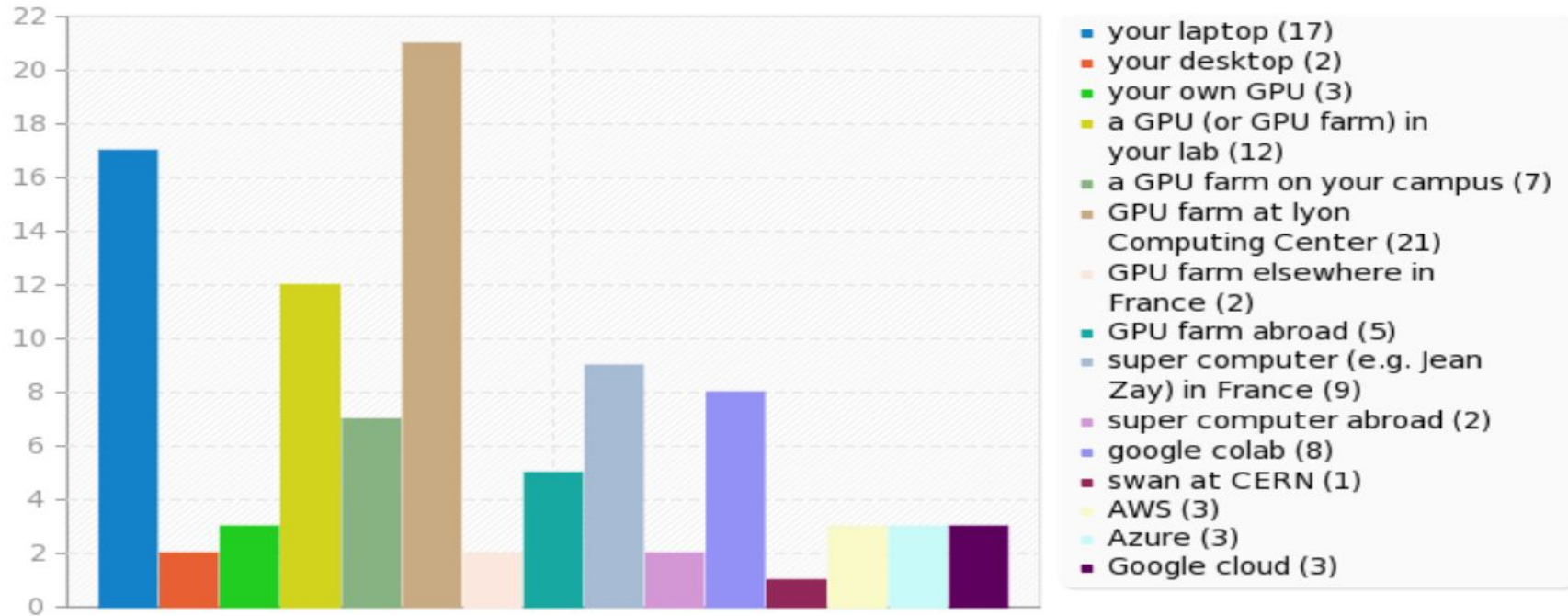
ML HPO



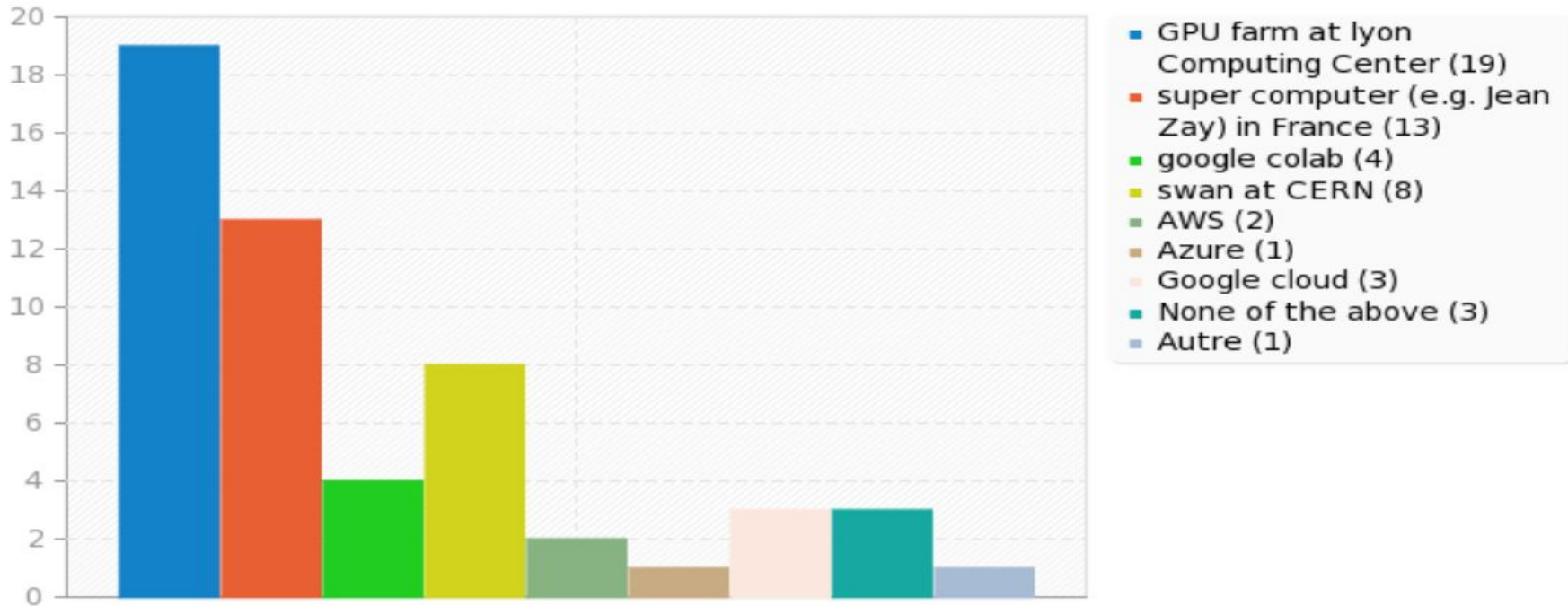
Resource usage now



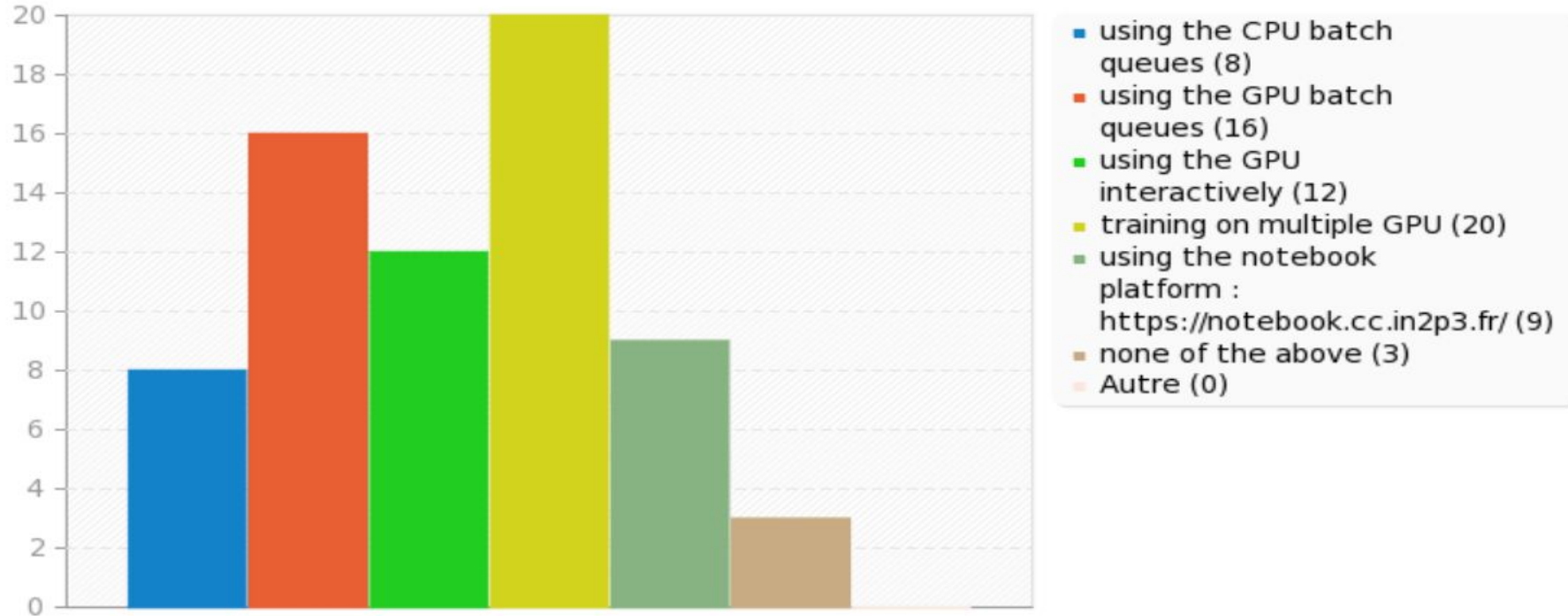
Resource usage future



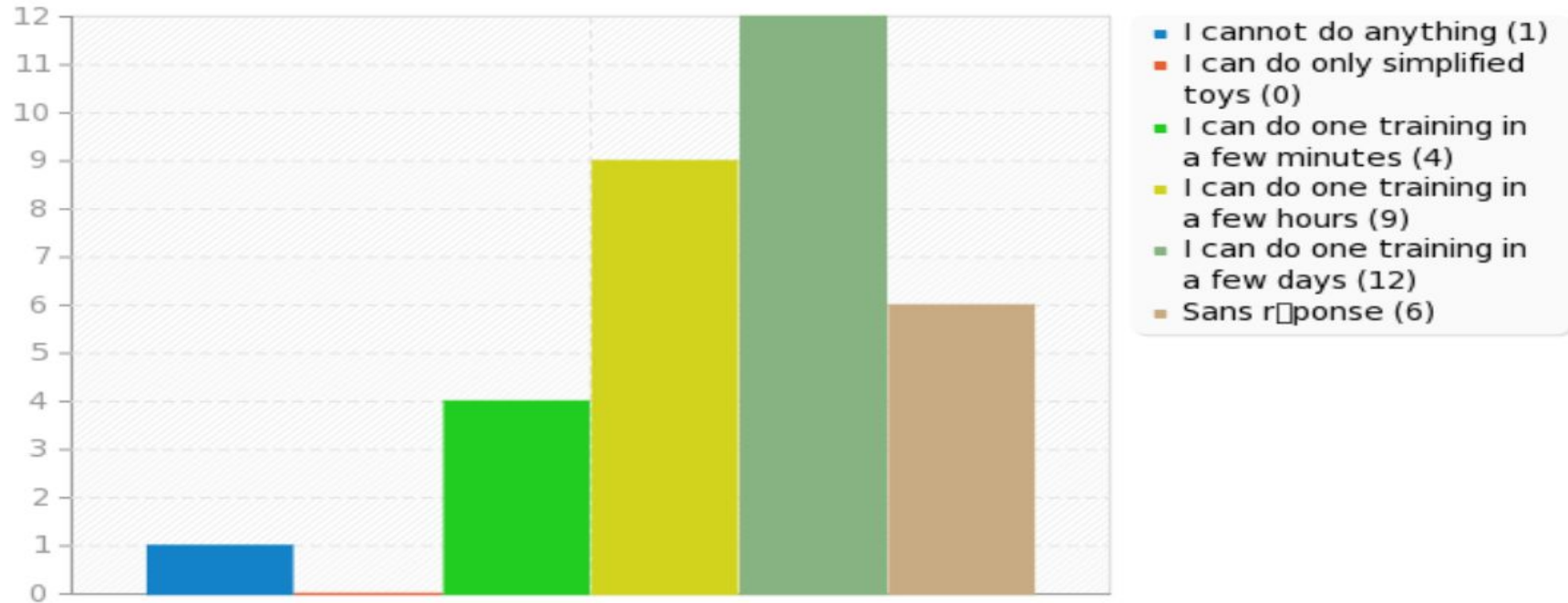
Need more information on:



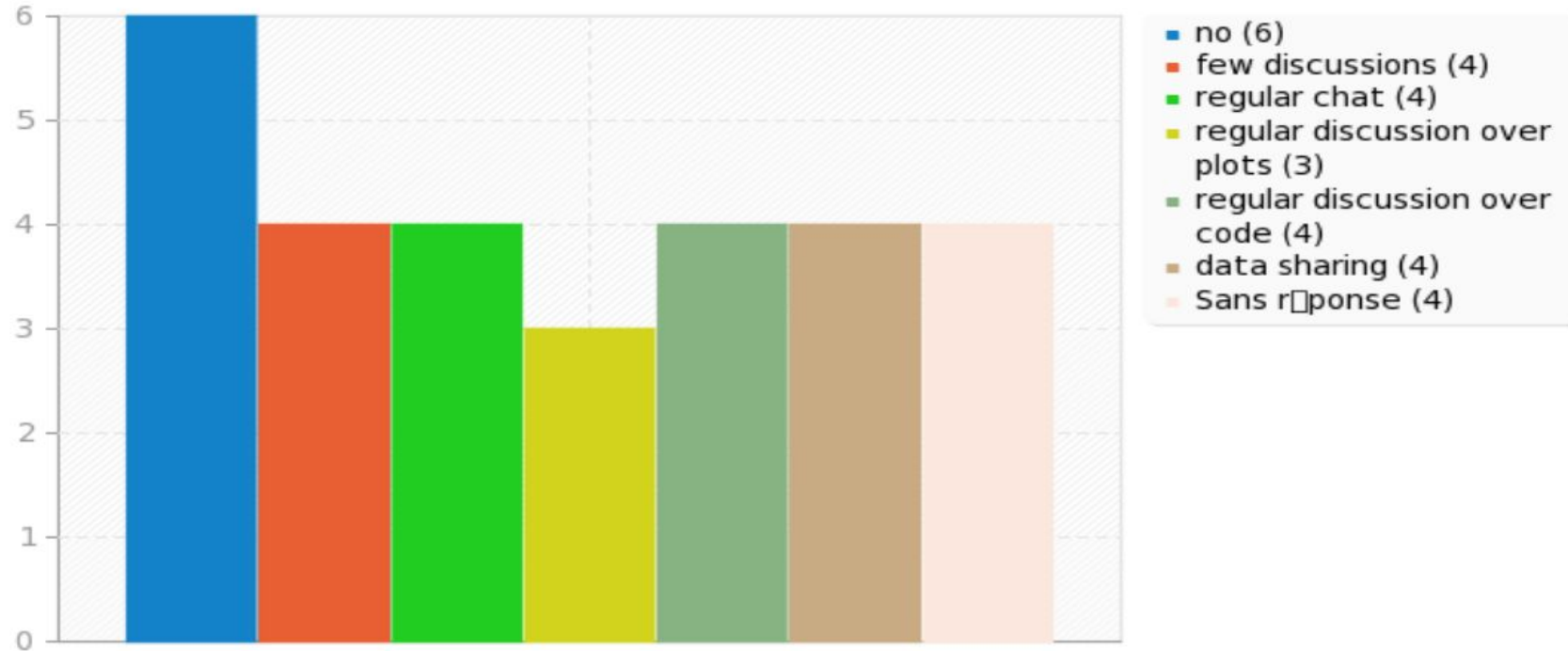
Need more information at Lyon CC on:



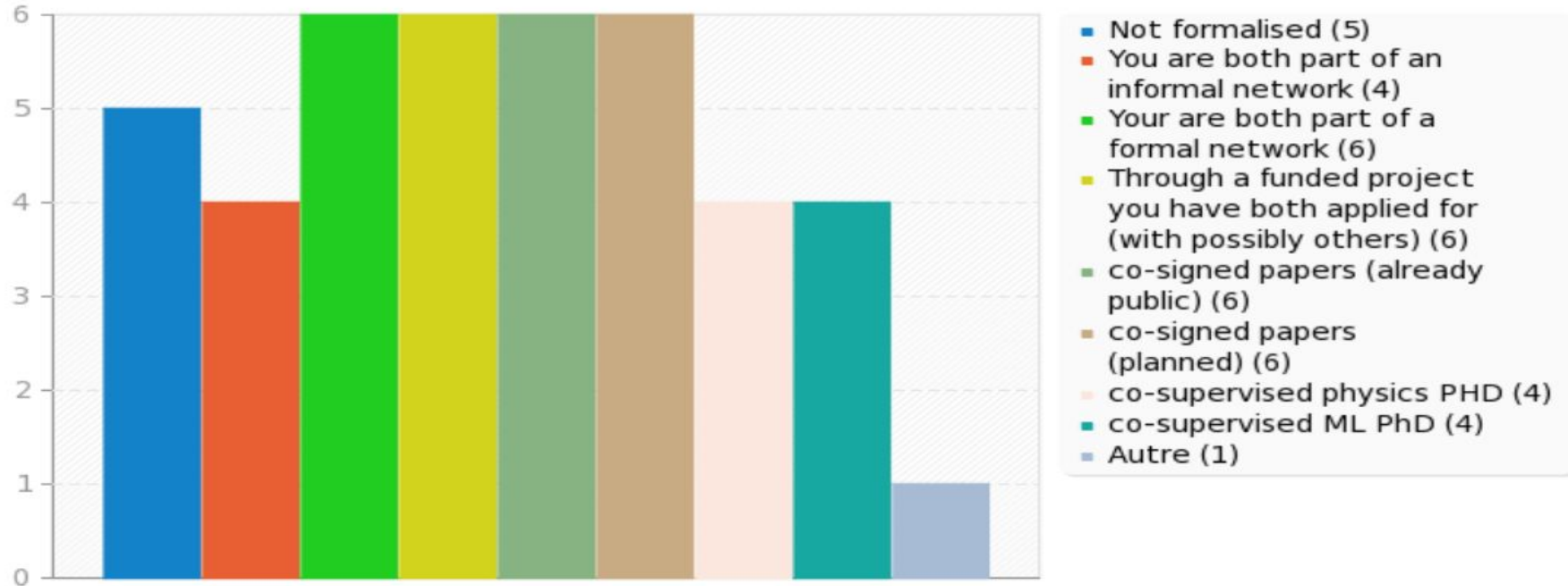
Future needs if ressource unchanged



Computer Scientist collaboration



Computer Scientist collaboration agreement



Where is the collaborating CS ?

