# IN2P3 ML

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## IN2P3/IRFU ML Workshop

Lyon CC-IN2P3 22-23 January 2020

# IN2P3 CompStat project

- 13k€ in 2019, not confirmed yet for 2020
- Overall goal is to favour development of ML at IN2P3
- Workshops (like this one)
- Challenge
- Tutorial (but manpower ?), see Reprises
- Sending physicists to ML conference (see Yann Coadous's talk tomorow)
- 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

# IN2P3 GT09 Prospectives Calcul Données

- GT09 Townhall 17-18 Oct at Clermont
- IN2P3 ML qui fait quoi document, and prospectives chapter
- Short white paper being written (one page for ML)
- Final overall prospectives workshop at Giens in Sep 2020 (?)

# Computing Resources

- What resources for ML work at IN2P3 ? (beyond laptop)
- Example : Aishik evaluates he has used 10.000 hours GPU at CC for ATLAS calorimeter simulation with GAN (one training takes ~10 hours)
- GPU at CC (see Sébastien's talk)
- Local university resources
- Jean Zay machine at Idris : need some paperwork but reasonably good (see email Alex Boucaud to Machine-Learning-l)
- Google Colab : free, perfect for tutorials but not for large scale
- Access to resources is one thing but efficient use ? E.g distribute training of one model on several GPU

# Contact with industry

- Involvement of industry can be valuable for project : european ITN, these Cifre, etc…
- Propose we share our contacts. My own:

| Company | Contact | Comment |
|---|---|---|
| Thalès IdF | Bernardo Resende | Bernardo (ATLAS PhD and post-doc) can study project and lias with Thalès teams around paris |
| LightOn Paris | Laurent Daudet | (Paris Diderot Physics professor on leave ) Startup developping Optical Processor Unit |
| KeenEye Paris | Paul Klein | (internship at LAL+CERN) Deep learning for bio medical application |
| B12 Bruxelles | Michel Herquet | (PhD in Th physics, MadGraph) Machine Learning consultant company |