GT5:R&D

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AG GDR Resanet,
9-10th December 2020,
LPC Cloud

GT5: Research and Development

Goals

- ✓ Identifying common R&D themes
- ✓ Educating about new technologies
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How to improve?

GT5: Research and Development

Initial ideas

Hardware:

- LaBr3/CeBr3 for gamma,neutron and charged particle detection

DAQ:

Data processing:

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Overlap with some IN2P3 network:

- Hardware, DAQ

Fill the gap for other:

- **Data processing**

Workshop Machine Learning

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- Survey b/ the meeting $\rightarrow$ mostly introductory
- Stimulate interaction with different type of actors

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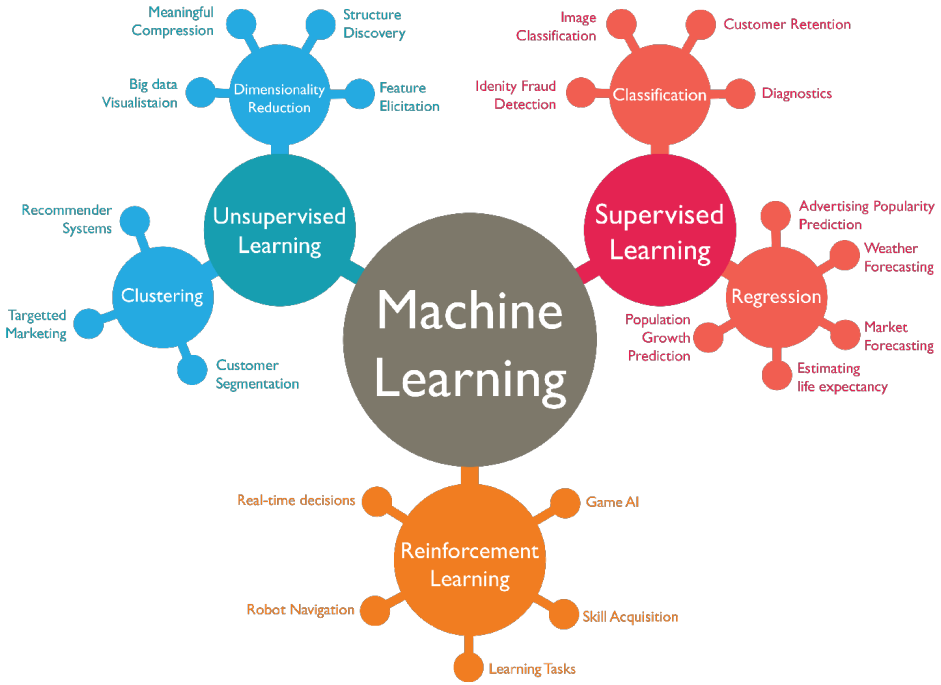
Format

- 2 lectures (1h30 each) by J. Donini and Y. Coadou (HEP)
  - introduce concepts
  - illustrate with applications
- Large overview of current applications in nuclear physics
  - data analysis, medical physics, theory, reactors, simulations ...

Workshop Machine Learning

Outcome

- Positive feedback
- Created awareness
- Impulse for upcoming events
- Creating an IN2P3 network?



PhyNuBE event

$\mathbb{IB}$: l'espace fini des nombres binaires

- Lecture by V. Lafage (IJCLab)
- Upcoming paper on the subject

→ How $\mathbb{IB}$ is different from $\mathbb{IR}$

→ Why and when it matters in our field

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Goals

- Creating awareness on issues and technologies
- Promoting good practices in the field
- Highlight R&D perfomed within RESANET lab.

Possible actions for 2021

Hardware:

DAQ:

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- High-resolution time-stamped trigger (DAQ network)

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e-RI scattering experiment at GANIL

- **Only topic for which a clear demand has been made to GT5**
- Presented physics case during prospectives: cover many topics of GDR

→ GT1: GMR, charge radius → charge density

→ GT2: Shape coexistence, fission

→ GT3: ab-initio and EDF approach

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Identified R&D needs

- HI e- accellerator (200 mA)
- HI RI production (photo-fission, transfert, MNT)
- SCRIT Ions-trapping: 1e7 particules cloud 100 μm by 120 mm
- e- / p spectrometer: High-Res. High-Acceptance
- Low energy ions identification
- Possible R&D at PERLE