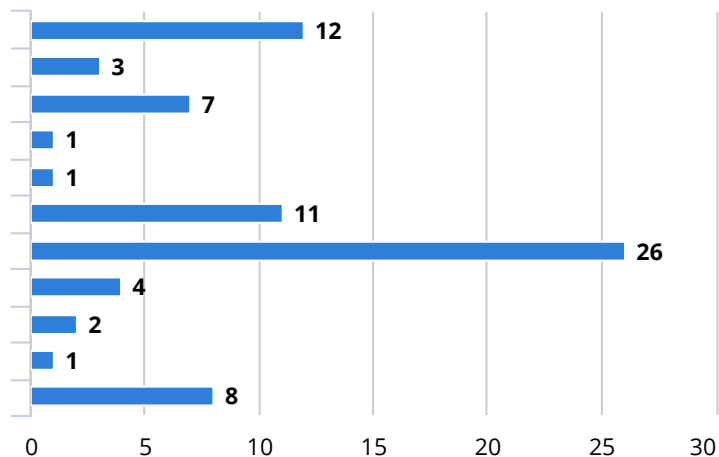


# ML related activity at IN2P3

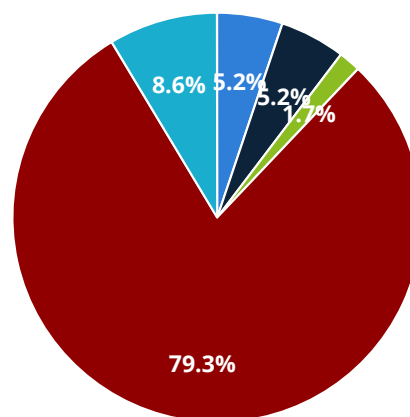
Cette page montre une analyse des données soumises, comme le nombre de soumissions par valeur de composant, les calculs et moyennes. Des composants additionnels peuvent être ajoutés sous le groupe de champ "Ajouter des composants d'analyse".

## Project type

[Chart options »](#)


IN2P3 project	12
ANR JCJC	3
ANR collaborative	7
ERC starting	1
other European funding	1
other funding source	11
physics PhD thesis	26
computer science PhD thesis	4
physics PhD thesis with Computer Science co-supervisor	2
School	1
other	8

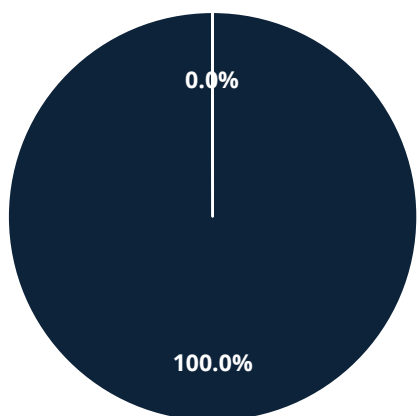
## Project status

[Chart options »](#)


foreseen	3
submitted (active)	3
just funded (inactive)	1
on-going	46
finished	5

## Starting year

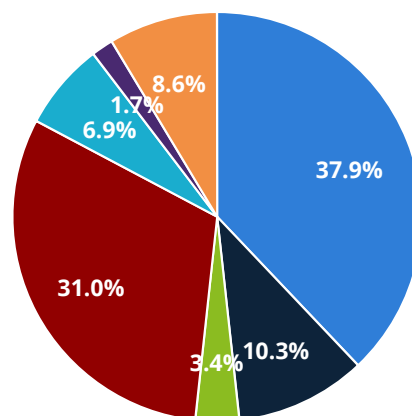
[Chart options »](#)



Laissé vide	0
Valeur entrée par l'utilisateur	58
Longueur moyenne des soumissions en mots (sans les blancs)	0.00

## Field

[Chart options »](#)



collider physics	22
neutrino	6
nuclear physics (non-collider)	2
astroparticle/cosmology	18
accelerator physics	4
theory	1
other	5

## Input data type

[Chart options »](#)

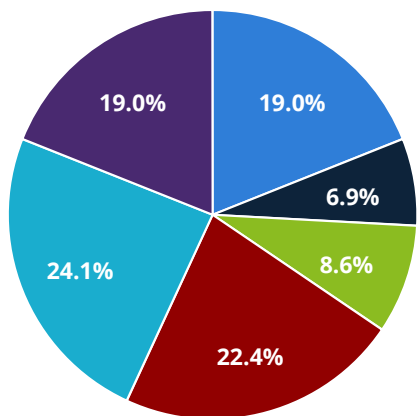
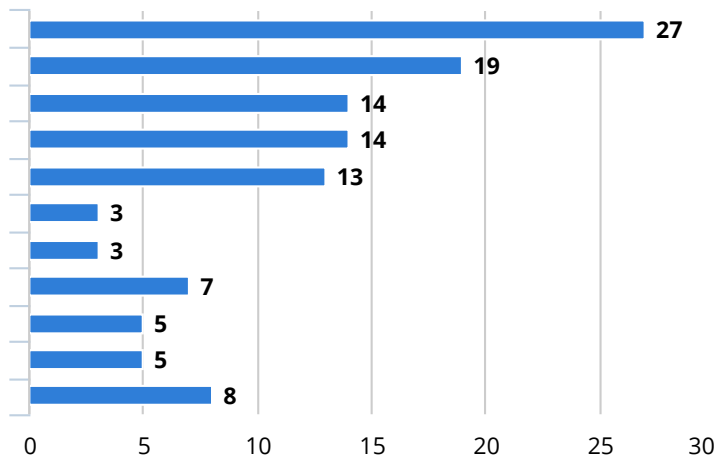


image	11
point cloud	4
event record ((semi-)raw)	5
event record (particles)	13
time series	14
other	11

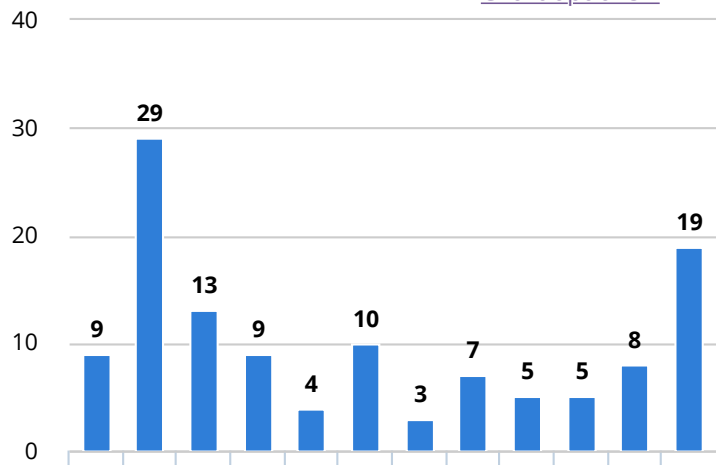
## Project type (if relevant)

[Chart options »](#)



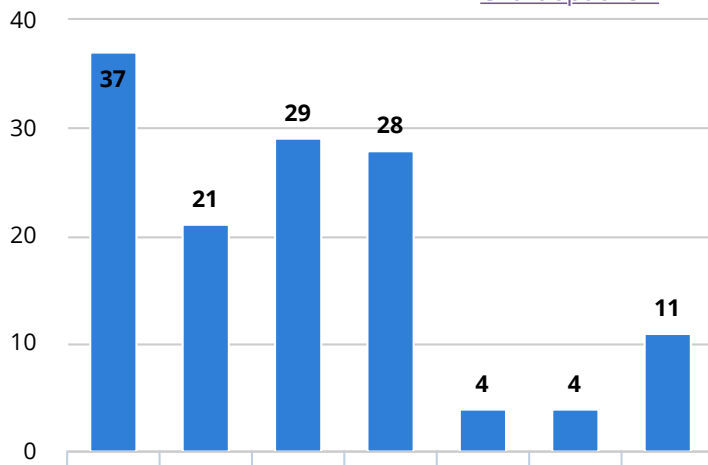
event-level inference	27
detector-level inference (particle reconstruction/identification/regression)	19
experiment-level inference (final derivation of parameters)	14
anomaly detection	14
simulation	13
surrogate model (not simulation)	3
control	3
online monitoring/processing	7
DAQ	5
trigger	5
other	8

## ML technique

[Chart options »](#)


BDT	9
dense NN	29
recurrent NN	13
graph NN	9
transformers	4
GAN	10
adversarial NN (not GAN)	3
VAE	7
Simulation Base Inference	5
bayesian Inference	5
bayesian NN	8
other	19

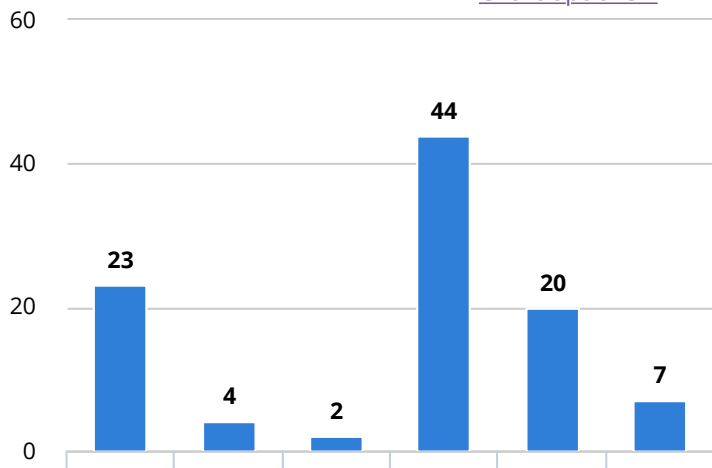
## Resources used (or planned to)

[Chart options »](#)


laptop	37
CPU unix server	21
local GPU server	29
Lyon CC GPU	28
CERN GPU	4
Jean Zay	4
Other	11

## Main software tools used

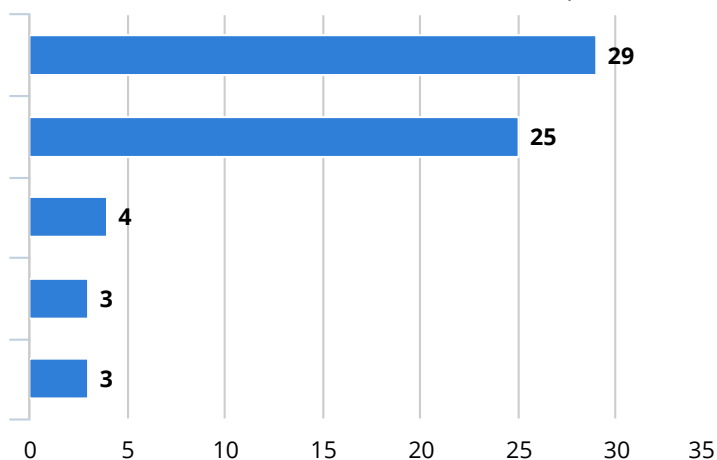
[Chart options »](#)



scikit-learn	23
XGBoost	4
TMVA	2
Tensorflow	44
Pytorch	20
other	7

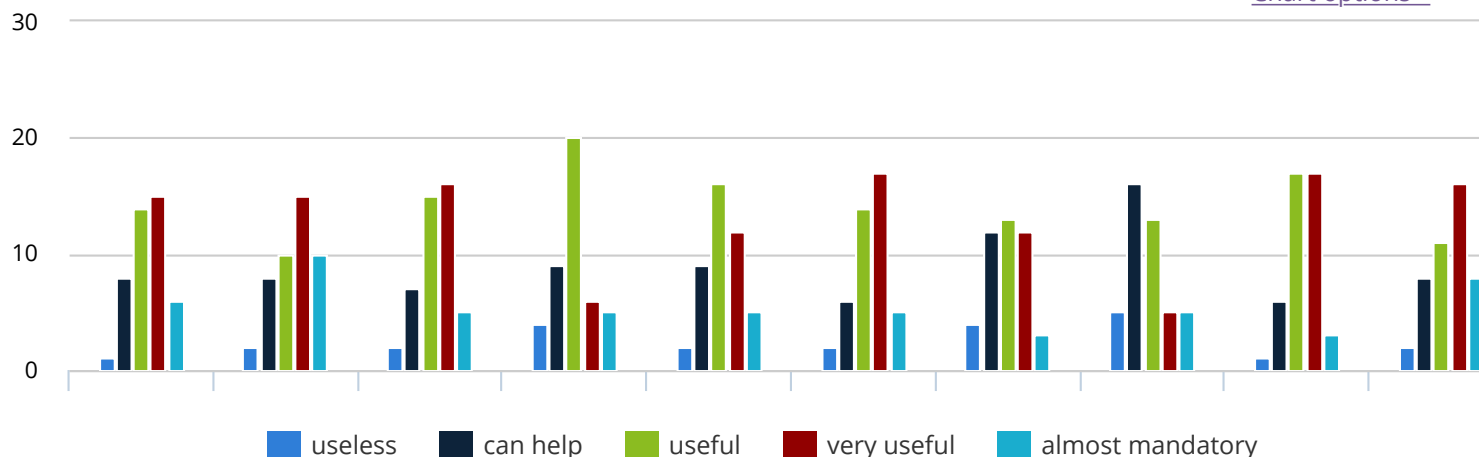
## The IN2P3 ML project has a small budget to support ML activity. Which of these activities would be of interest to you:

[Chart options »](#)



Sending engineer/Physicist to a ML conference	29
Inviting a CS collaborator to your lab	25
Inviting a CS collaborator to physics workshop/conference	4
Inviting a CS collaborator to an experiment site (e.g. CERN)	3
other	3

## As far as training/skill improving is concerned which of these would/do you find useful ?

[Chart options »](#)


	useless	can help	useful	very useful	almost mandatory
self-tutoring with on-line standard ML tutorial (with interactive notebook)	1	8	14	15	6
self-tutoring with on-line tutorial on a physics dataset (with interactive notebook)	2	8	10	15	10
one week in person dedicated school	2	7	15	16	5
online 1h seminars (by physicists) on specific advanced topics	4	9	20	6	5
online 1h seminars (by computer scientists) on specific advanced topics	2	9	16	12	5
one day detailed discussion with IN2P3 colleagues doing similar things (in hybrid format)	2	6	14	17	5
online code walk through of recent paper published with code	4	12	13	12	3
online journal club about recent relevant paper	5	16	13	5	5
several day in person ML workshop with IN2P3 colleagues	1	6	17	17	3
web site listing available resources (resources being useful topics listed here)	2	8	11	16	8

### > Ajouter des composants d'analyse