

# MAI Deep Learning

# Autonomous lab Embeddings



HIGH PERFORMANCE  
ARTIFICIAL INTELLIGENCE



Barcelona  
Supercomputing  
Center

Centro Nacional de Supercomputación



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# Rules

- Work is done in pairs. Agree among yourselves.
- Send a small report of experiments, focusing on the decisions made in the process, and details of the experiments
- Evaluation is based on answers to a set of questions made on the report.



# The work

Operations with embeddings. Target must be the same as lab1.

- Explore the impact of pre-training
  - Different sources
  - Different transfer learning configurations
  - Try fine-tuning, feature extraction, or both
- Try to beat your original performance. If it was already very good, try feature extraction, or complicate the task (less data for train).



# Evaluation

- You will be evaluated based on your understanding of DL methods
  - On the coherency of their use in your work
  - On the correct assessment of the results, and on the decisions made as a result
- There will be two deliveries open. One for the report, the other one with the rest:
  - h5 file (trained weights, if applicable)
  - json file (architecture, if applicable)
  - txt file (short description of the data used for training/val)

