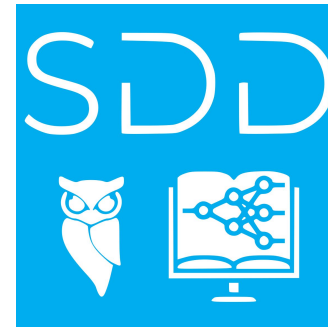


# Hackathon SDD 2026



# Hack on what?



1. Predicting short-form video popularity



2. Moving cubes with a robot arm



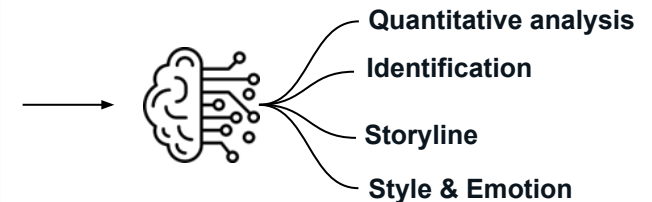
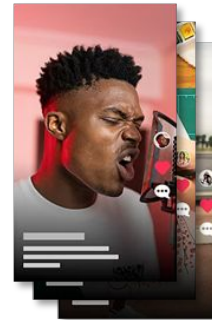
3. Identifying bees on images

# Subject 1: Predicting short-form video popularity

Responsables : Mathis CHENET, Romain HANON

## Context :

Short-form videos are now everywhere—on every platform, in every feed—but it remains difficult to understand why one video becomes **popular** while another doesn't. Solving this could be valuable not only for **TikToks** and other shorts, but also for **advertisements**—helping better anticipate performance (e.g., ad targeting and timing).



## The hackathon :

The challenge is to predict video popularity from a dataset of **~4,000 short videos**. Each video comes with metadata and a target “**popularity**” variable reflecting engagement and reach (views, shares, and likes), providing a concrete baseline to model and improve. Extracting relevant information on videos while dealing with **large scale** analysis will be key to success.

## Objective :

Develop a complete solution capable of :

1. Extracting as much useful information as possible from each video
2. Using these features to build a model that predicts the popularity score as accurately as possible.



# Subject 2: Moving cubes with a robot arm

Responsables : Corentin Friedrich, Lucas Hervier, Valentin Guillet, Yannick Prudent

## Context :

The challenge: teach a robot arm to place 1, 2, or 3 colored cubes onto a 2×2 wooden grid by reading a small reference card that shows, for each cube color, a colored cross on the target cell.

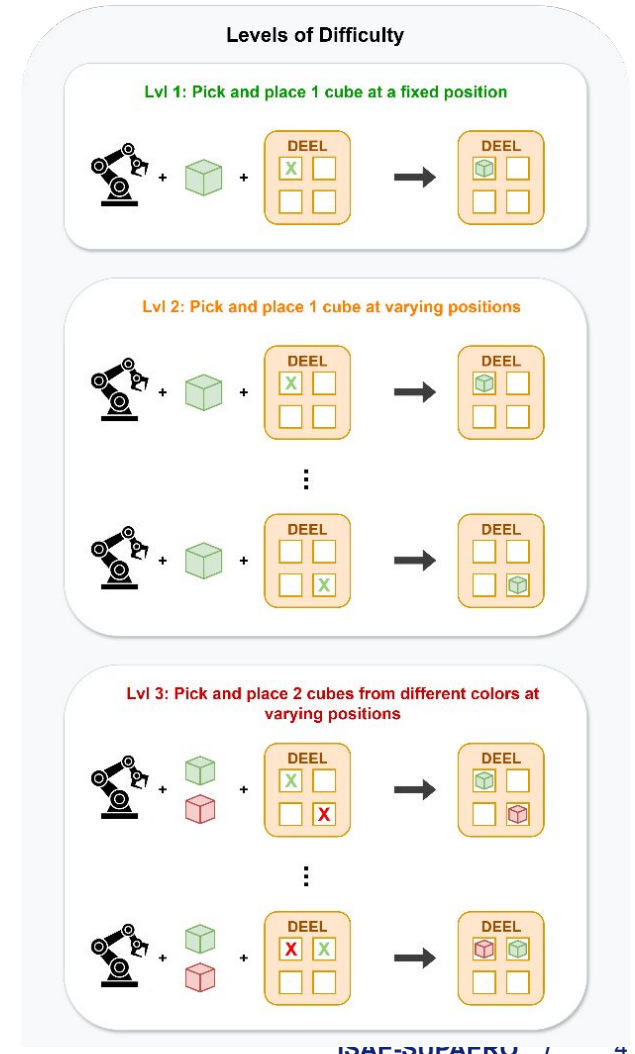
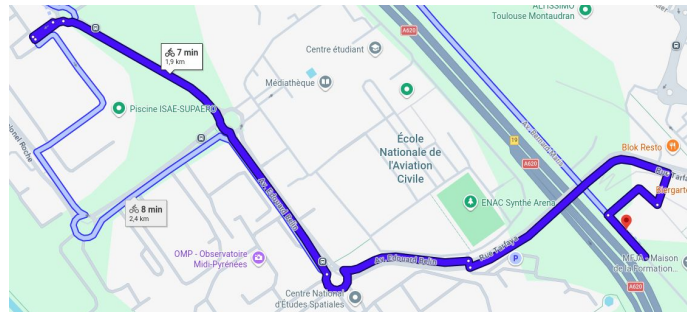
Sounds simple? In practice, it's a tough robotics + learning task!

Success depends on how strategically you build datasets (coverage & curriculum), train models, and plan your approach.

## The hackathon :

Your robot will be evaluated over 4 levels of increasing difficulty. Each level has 5 trials. You must succeed on at least 3/5 trials to unlock the next level.

This hackathon will primarily take place at IRT Saint Exupéry, B612. A laptop with GPU is recommended; GCP will be used in addition.

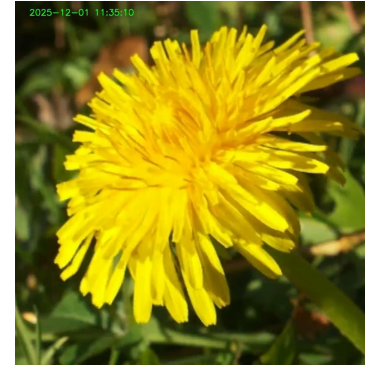


# Subject 3 : Identifying bees on images

**Responsables : Maxime Cauchoix, Edgar Remy, Axel Carlier**

## Context :

Pollinators are essential contributors to ecosystems and are the focus of particular attention in studies on biodiversity decline. We are developing a non-invasive system for monitoring bee populations, designed to be positioned above flowers (see opposite).



An “Entomoscope”, a device to monitor pollinators

## The hackathon :

We provide you with a species-annotated database of *Andrena* images, the most represented genus in the bee family. The objective of the project is to develop a model capable of identifying the *Andrena* species present in each image.



Photos of several *Andrena* species

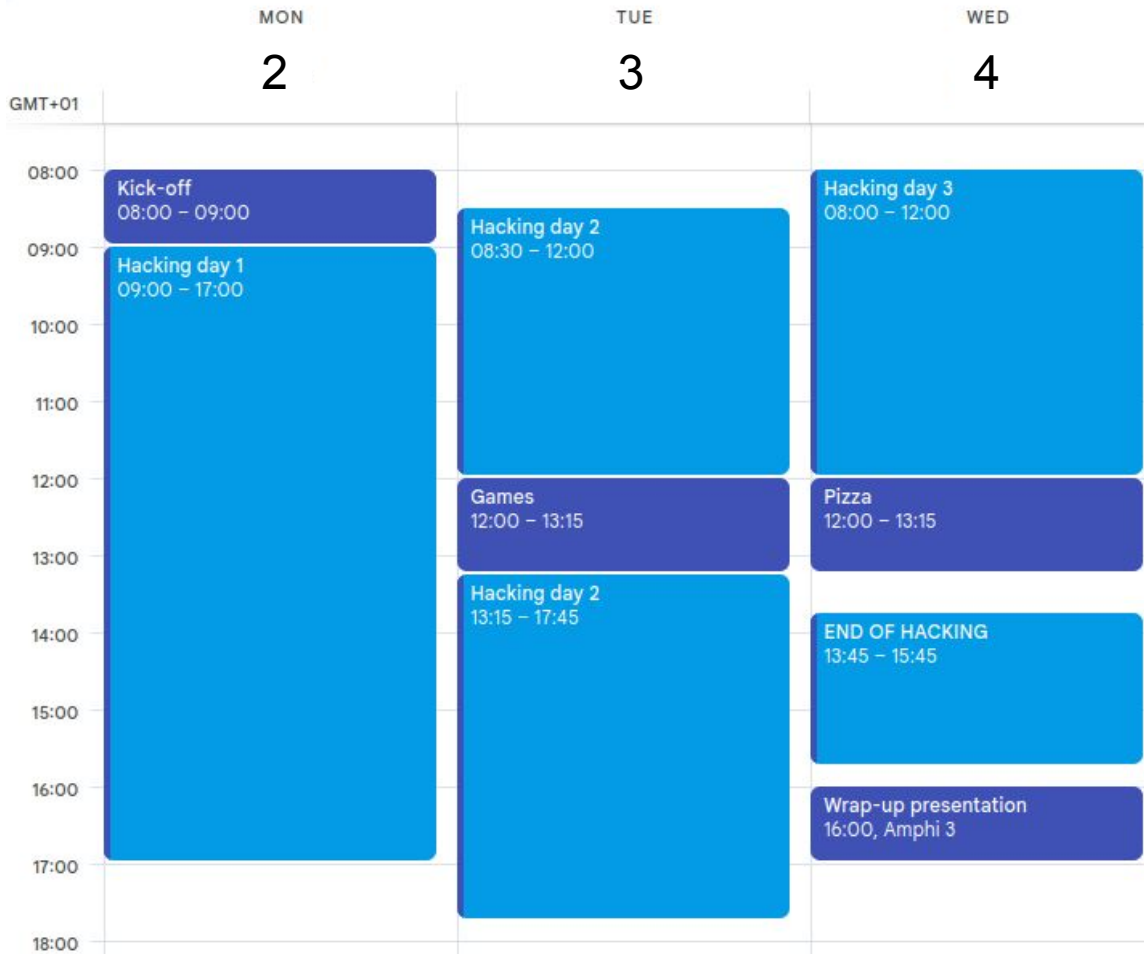
## Challenges :

The class distribution in this problem is highly imbalanced: some species have hundreds of samples, while others have fewer than ten.

In the long term, the model will be embedded in the monitoring device (which does not have a GPU), so we would like it to be as lightweight and fast as possible.



# Hack when?



**Monday 8h00 :**  
Kickoff presentation

**Tuesday 12h :**  
Board games

**Wednesday 12h:**  
Pizza 🍕 🍕 🍕

**Wednesday 16h00:**  
Amphi 3  
Wrap-up presentation

Day schedules depend on subject,  
check with partner

# Hack where?



61.101

Dedicated Slack channel  
(#hackathon1 - #hackathon3)



61.102



61.103



Hacking on site is the best way to win!

61.104



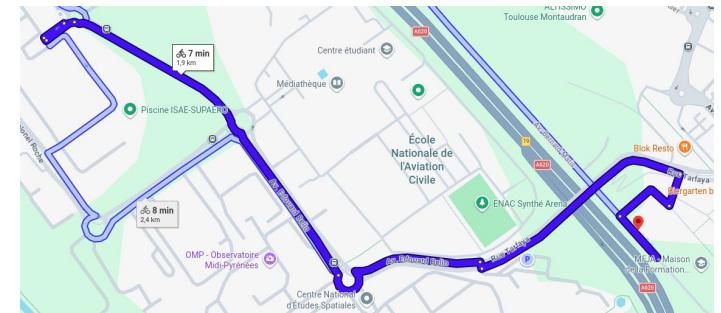
**B612** - 3 Rue Tarfaya, 31400 Toulouse

Rooms on site if needed:

Monday: **61.110**

Tuesday: **61.105**


Wednesday: **61.105**




# Hack how?

Goals for this hackathon:

 Practice knowledge gained in SDD

 Cover parts of SDD material you're not sure on

 Work with your classmates in teams of 2 to 5

 See examples of real-world data science

 Have fun!

This hackathon will be a success if you:

 **Communicate**

Make sure everyone is on the same page about your objectives and plan.

 **Ask for help**

Partners will be available throughout the hackathon to answer questions. Axel is also available for general questions.

 **Help each other**

That's what teammates are for!

 **Hack**

From Pandas to PyTorch, show off your SDD skills!

# Hack how?

Evaluation is based on:

## Effort

Try your hardest during these three days to get the best results

## Communication

How well you work as a team and coordinate with the partners

## Planning

You only have 3 days! How will you use them? Plan well, including what task each member of your team will do.

## Results

Push your results to the maximum!