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1.　Homepage:

Figure I-1 Homepage UI

On this page, you can find some general information about the project/website, contact.

To access more features, you need to login, click ⬦ button on top right of the header bar, or you can click on Get Started button, here there are 2 options: register or login.
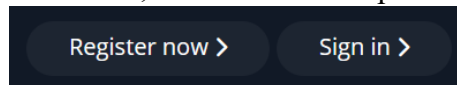
Figure I-2 Register and sign in button on homepage

When you already signed in, this area in Figure I-2 will become logout button.

2. Login page:
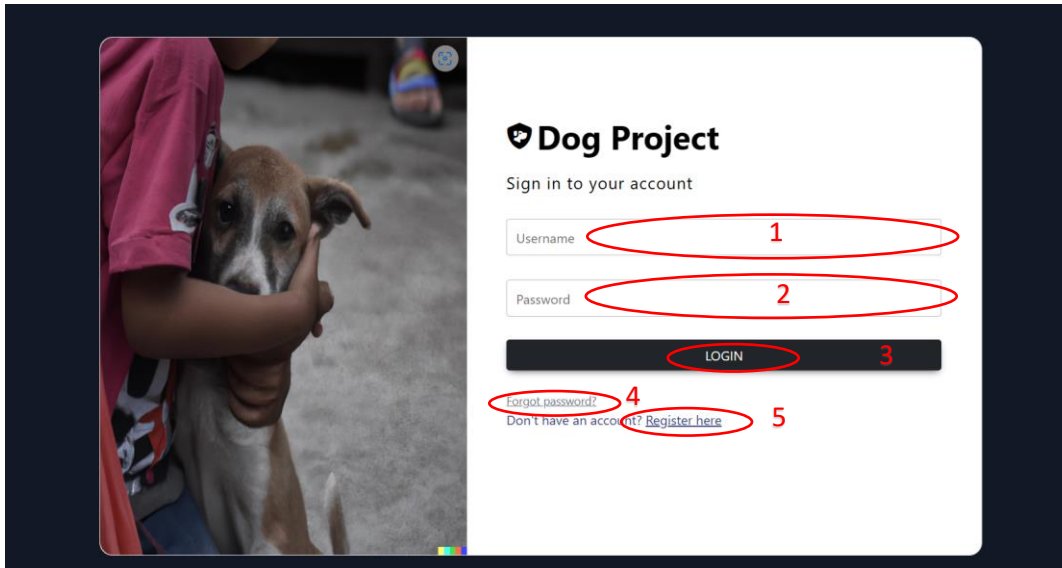
Figure I-3 Login page UI

Enter your username [1], password [2] and press login [3] to log in.
In case you forget your password, click on [4].
If you do not have an account yet, you can register one by clicking [5].

3. Register page:
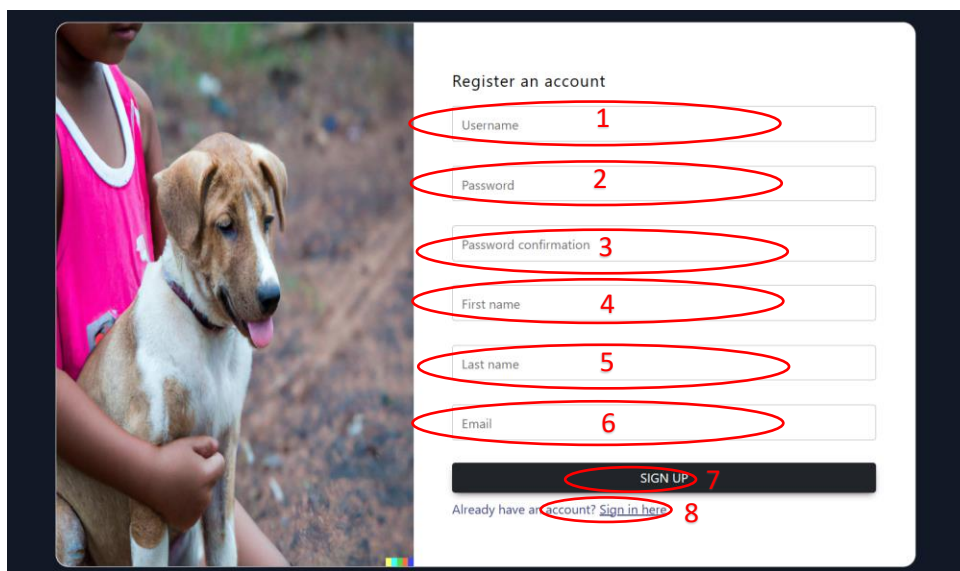
Figure I-4 Register page UI

You must enter all fields ([1],[2],[3],[4],[5],[6]) to be able to register, then, click on [7] to finish the process.
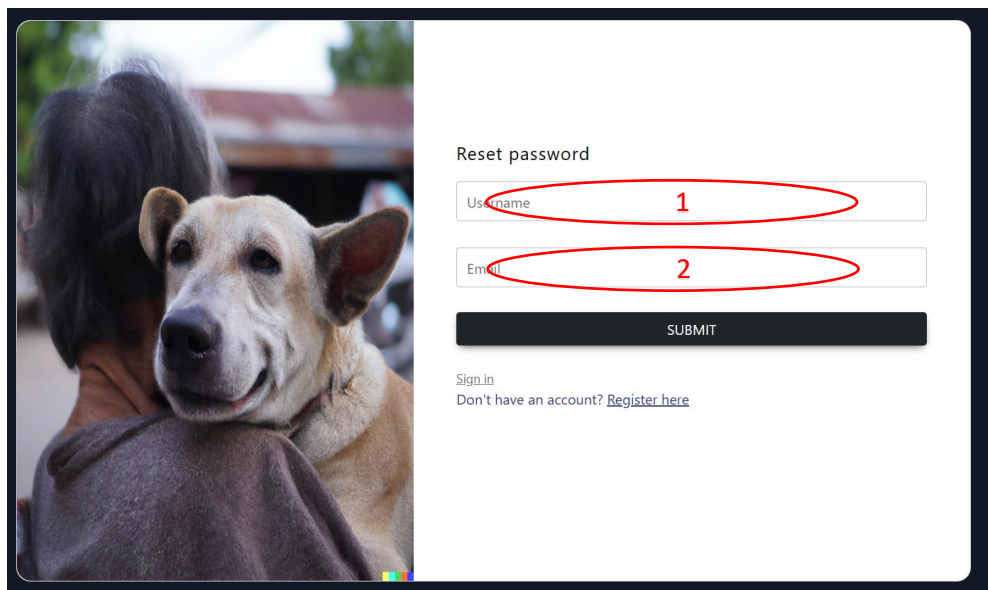
Username, password, and email must meet requirements:

- No space, gap accepted in username
- Password: not a part of other personal information, at least 8 characters, not a commonly used password, not entirely numeric
- Email must comply with the standard form: abc@xyz...

You can also go back to login page by clicking [8].

When registering successfully, an email will be sent to administrators to inform them of the new registration request.

4. Reset password page:

Figure I-5 Register page UI

To reset your password, you must enter your registered username and email ([1], [2]) to recover your account. An email including a new password will be sent to the entered email.

5. Modify personal information:

In case you have already logged in, an icon 👤 will be added to the header bar (next to logout button). Click it to modify your email, first and last name or change your password if you have made an error while creating an account.

6. First visualization page: Explore Data by Dog

When you are assigned to specific campaigns by one of administrators, you can access the page to explore data of the campaigns.
Assume that you are permitted to access SIBETAN and SRE RUESSEY data.

Login to your account, from now on, you can access the page by clicking ☰ (top left of the header bar) to expand a side bar (Fig below).
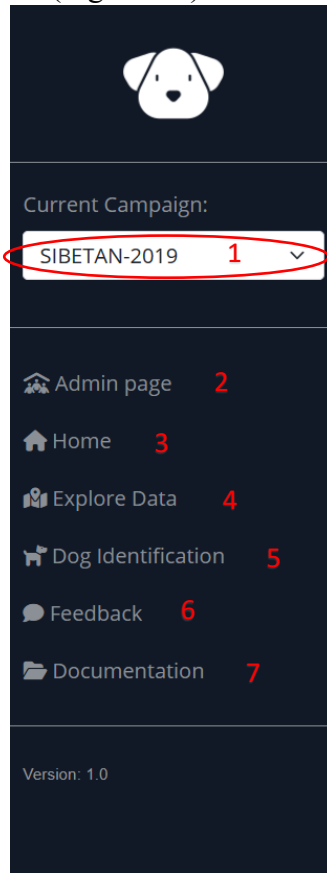
Figure I-6 Side bar

The first thing you need to do to access your desired campaign is selecting the campaign [1]

Only administrators can access [2]

[3]: Homepage

[4]: navigate to Explore Data by Dog page

[5]: Dog Re-Identification page

[6]: Feedback on data by campaign

[7]: Reference document about project/website.

Figure I-7 Explore Data by Dog UI

By clicking on [4], you can see the interface like the Figure I-7

[8]: An area shows a bar chart (number of videos by dog, here "dog" means cluster, we use specific algorithms to group videos that may show the same dog, then, set an index to the cluster. Moreover, each dog has an avatar [15] (representation thumbnail)

[9]: A map illustrates trap camera position during a campaign.

If you hover on a bar chart with the mouse, it will give you the exact number of videos for a given dog.
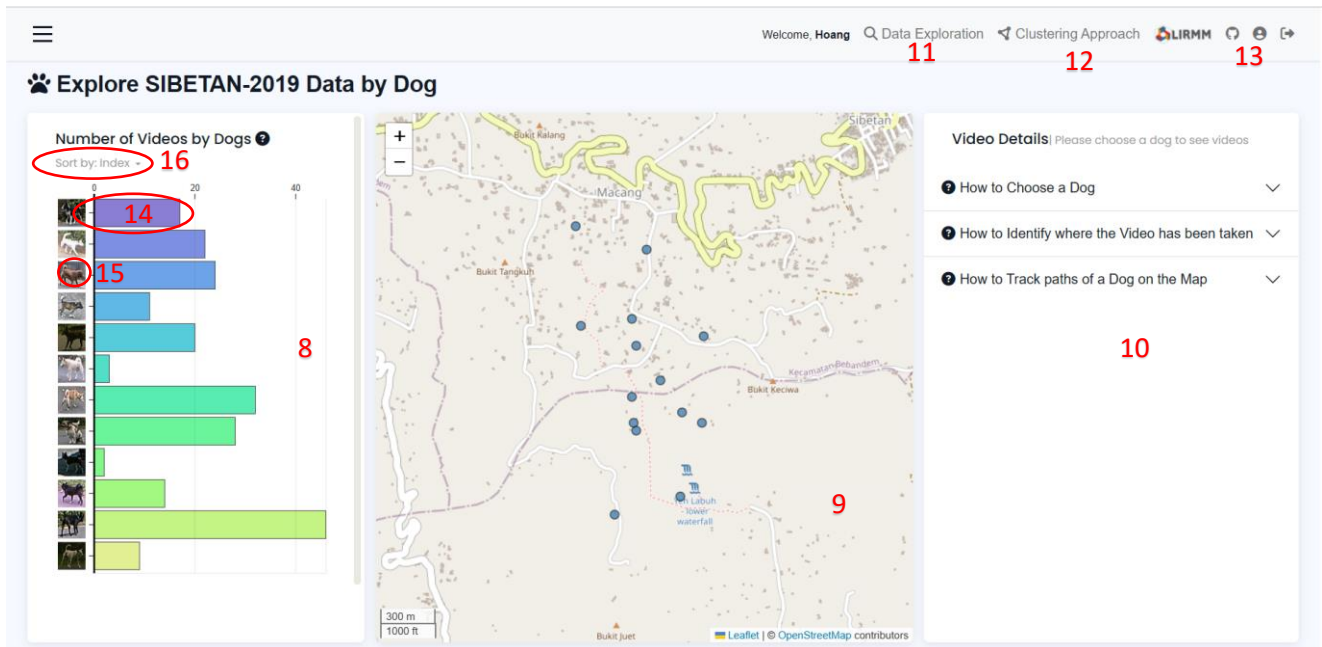
If you hover on a blue spot (map), you will know the camera id.

[10]: A division shows some instructions. It will show video list of a dog when you click on any bar of the bar chart

[11]: It allows user to switch between visualization pages (Explore by Dog or Camera)

[12]: You can change clustering method but for now, we have provided only 1 method: Agglomerative Clustering

[13]: Logout

[15]: Avatar of a dog, when clicking on it, you can see all thumbnails of this avatar

[16]: Sort a chart by index or the number of number of videos for each dog.

[14]: A bar chart shows the number of videos of a given dog, after a click on a bar, all camera positions where this dog was captured will be displayed on [9], and the video details are also shown on [10] like the figure below.
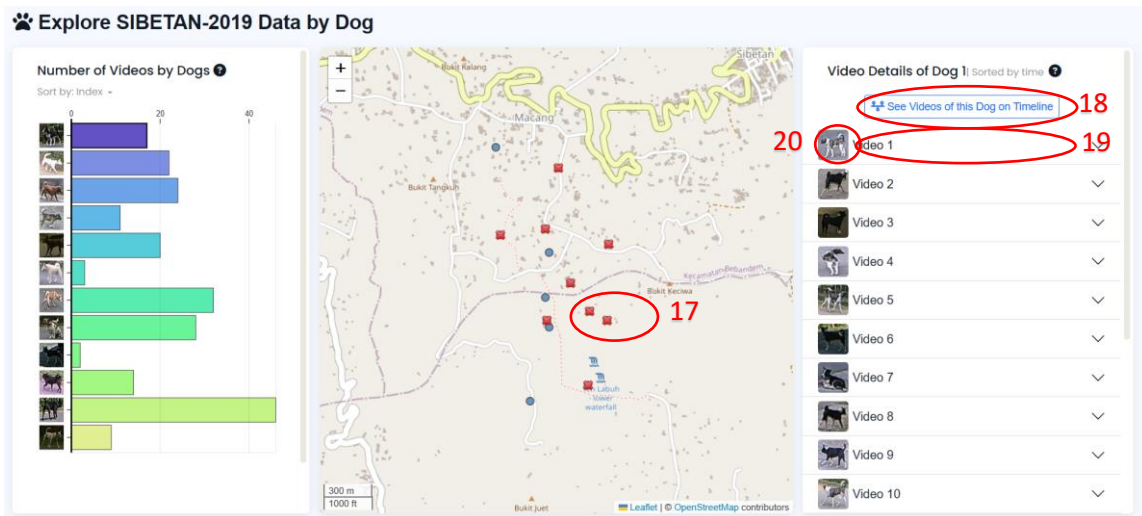
Figure I-8 Result after a click on a bar of the chart

After a click, a full video list of the clicked dog will appear on the right panel. They are videos recorded by trap camera during the campaign and sorted by time (from the earliest to the latest)

The X symbol [17] indicates the examined dog has not been to this place during the campaign.

By clicking on [18] you will see the videos of the dog displaying on the timeline. It is possible to pan or zoom in/out. The figure below shows how it looks like.

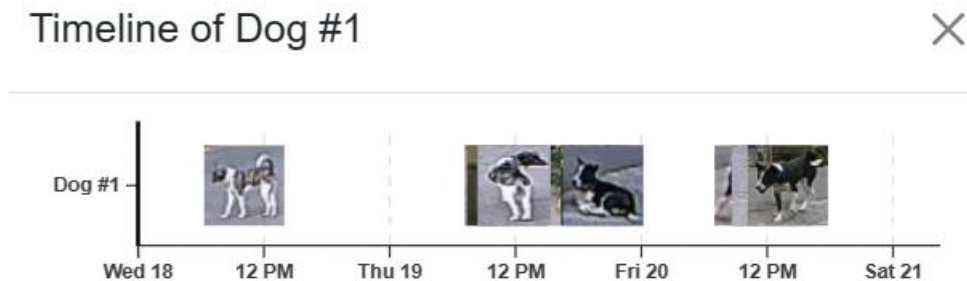*Figure I-9 Video timeline, on Explore Data by Dog page*

[20]: Dog thumbnail, clicking on it will open the modal showing all dog thumbnail of the clicked video.

You can expand the video accordion [19] by clicking on it, showing the video details such as the video is taken by which camera as well as the start time and end time of the video.

From now on, there are 2 modes of usage: single and multi-track on the map [9]:
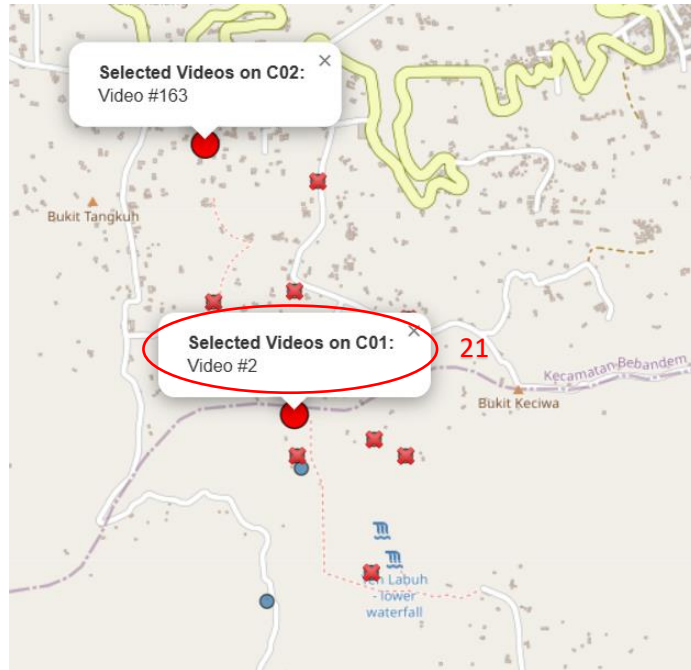
Figure I-10 Single-track mode on Explore Data by Dog page

- Single-track mode: when you expand UNCONSECUTIVE videos in the video list (right panel) (e.g., video 1,3,5…), it will show you the camera positions where the videos are recorded (Figure I-10). Note that the video ID shown on the popup [21] is the ID of this video on the database (global ID) not the video order that you can see on the video list.
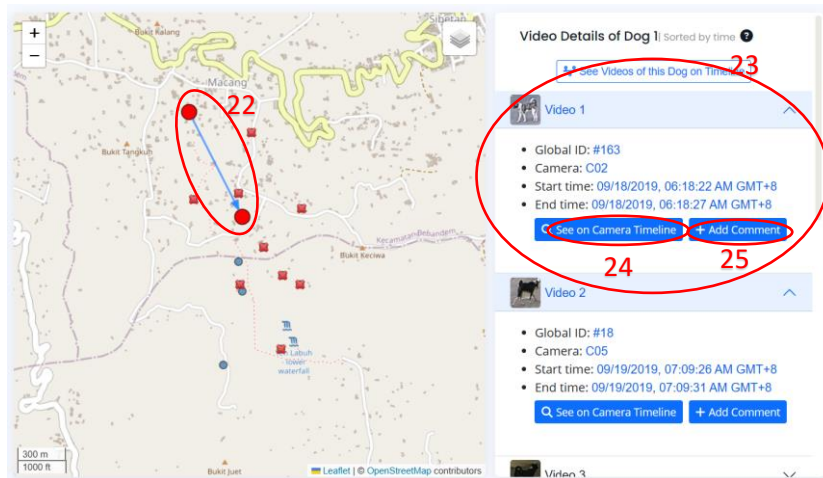

Figure I-11 Multi-track mode on Explore Data by Dog page

- Multi track mode: it is enabled if you click on CONSECUTIVE videos, then, a path [22] between cameras emerges on the map to estimate the dog's trajectory (Figure I-11). Clicking on the path will trigger the popup showing the distance between cameras, the time difference between 2 activated videos.
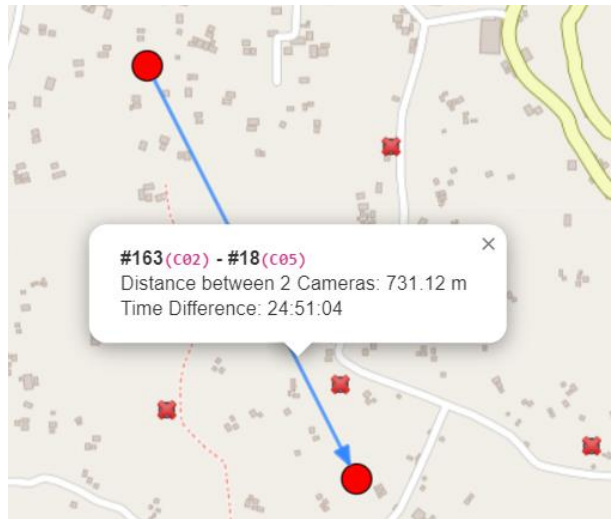
Figure I-12 Path popup showing information after a click on the path

Look at the expanded video, for example [23], you can find 2 buttons [24][25]:

The first one [24] is to direct to the 2nd visualization page (Explore Data by Camera) where you can view the video on the timeline (highlighted with a red outline). This timeline will be explained more later.

The latter button [25] will be useful provided that you find any abnormalities in the video and want to add comments.

Figure I-13 Give feedback

After the button (add comment) is clicked, some questions appear to collect your feedback. The feedback will be submitted and saved in our database to help admins correct it. The result of this feedback is shown on the Feedback page.

Note: feedback from one user for 1 specific video can be modified until admins admit or reject it.

7. Second visualization page: Explore Data by Camera

To be able to access this page, you need to click on Q Data Exploration (on header bar, 1st visualization page) then select Explore by Camera.
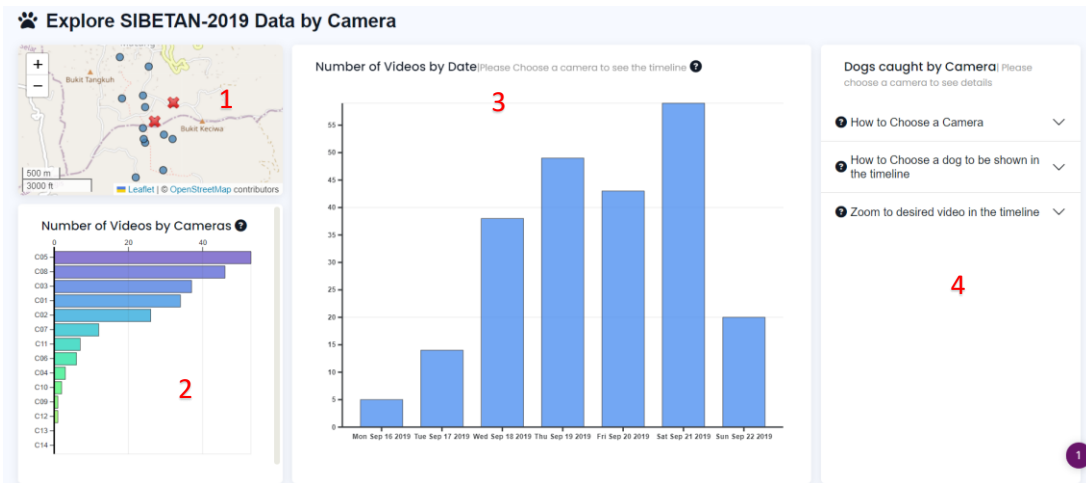
Figure I-14 Explore Data by Camera UI

You can find here 4 main sections.

[1]: A map shows the position of all cameras. The symbol X on the map indicates there was no dog caught at this place.

[2]: The number of videos by camera chart. For example, the camera C05 took over 50 dog videos in the SIBETAN 2019 campaign.

[3]: A chart illustrates the number of dog videos taken by day. This area will be replaced by camera timelines after a click on the bottom left bar chart.

[4]: Some instructions, this area will be replaced by dog details.

Figure I-15 Result after a click on a camera bar on the bottom left chart

The position of the active camera will be highlighted on the map [5].

When clicking on a bar of a camera, a camera timeline appears. The timeline in the middle of the interface has the time scale as x axis and y axis dedicated for different dogs (clusters) that are caught by this camera.

[7] You can enable a dog to be shown on the timeline or hide it by checking corresponding boxes.

[6]: Video thumbnails, when you click on specific thumbnail, the right panel will show the video details (like what it does in 1st visualization page).

[8]: Dog details, in this area, you can expand a dog to see its videos. When you click on any video, the timeline will automatically focus on the video thumbnail.

Note: on the timeline, it is possible to pan left/right, zoom in/out by the time scale axis

8. Feedback page

This page displays feedback from users that report abnormalities of dog videos in the 1st visualization page. Return to section I.6, figure I-11 to discover how to give feedback.
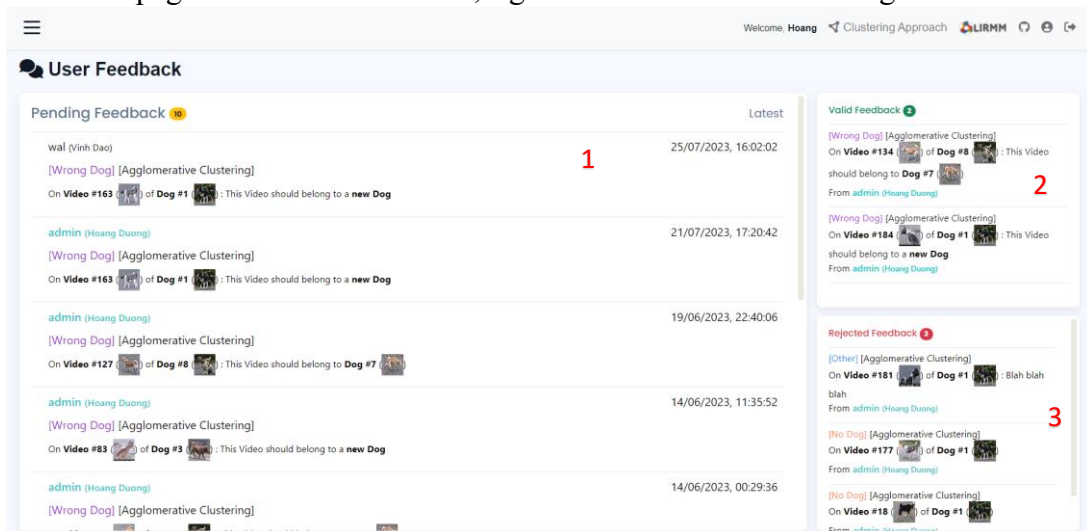

Figure I-16 Feedback page UI

We have different feedback for different campaigns and algorithms.

[1]: pending feedback area, in which the feedback is waiting to be evaluated by admins. An admin can accept valuable feedback or reject wrong/spam feedback or even delete it by clicking on feedback, these icons will appear afterwards at the end of feedback ☑ ☒ 🗑 (For further study, this kind of feedback will support data correction, improving the confidence of clustering method…). Each feedback complies with a form:

Username of author (first name + last name)
[Type of abnormality] [Clustering method]
On Video #xyz of Dog #abc: feedback of user

Note: your username will be highlighted (cyan) to distinguish your feedback from others.

[2]: valid feedback area shows feedback accepted by admins.

[3]: rejected feedback → rejected by admins.

<u>Note:</u> As mentioned, you can modify feedback until admins validate it.

9. Dog Identification page:

This page provides the functionality that predicts the most similar dog in specific campaign based on your input dog images.
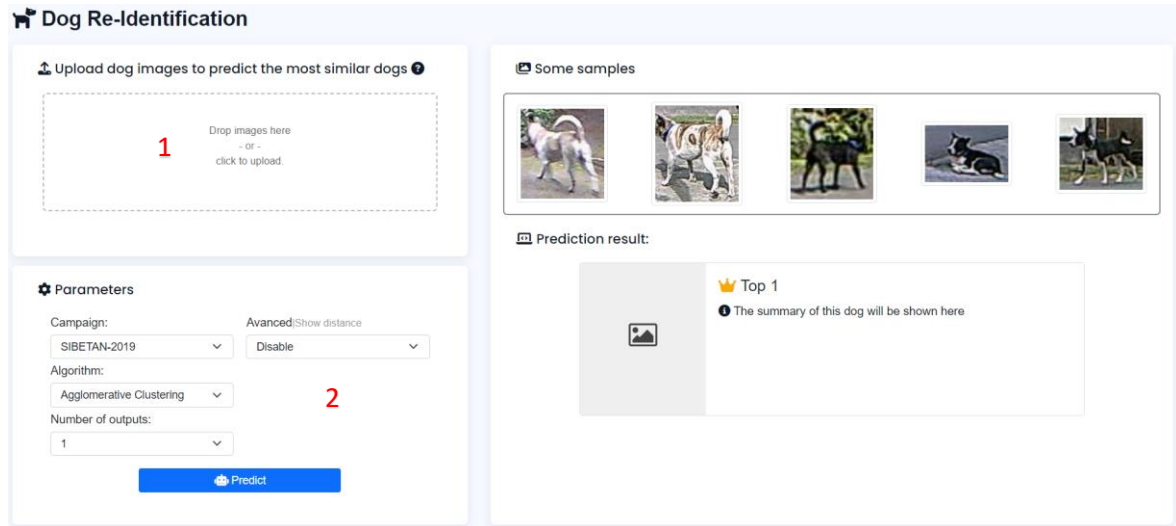

Figure I-17 Dog Identification page UI

[1]: Drag and drop your images to this zone. Then, you can crop it if the image has a noisy background by hovering on the image. (max images: 12, max size each image: 1920x1080, 3Mb)

[2]: In this section, you can choose a target campaign to find the most similar dogs in this campaign to your dog input.

You can increase the number of outputs to show multiple prediction outcomes (for example, set this param to 3 to show 3 dogs that look like your input the most)
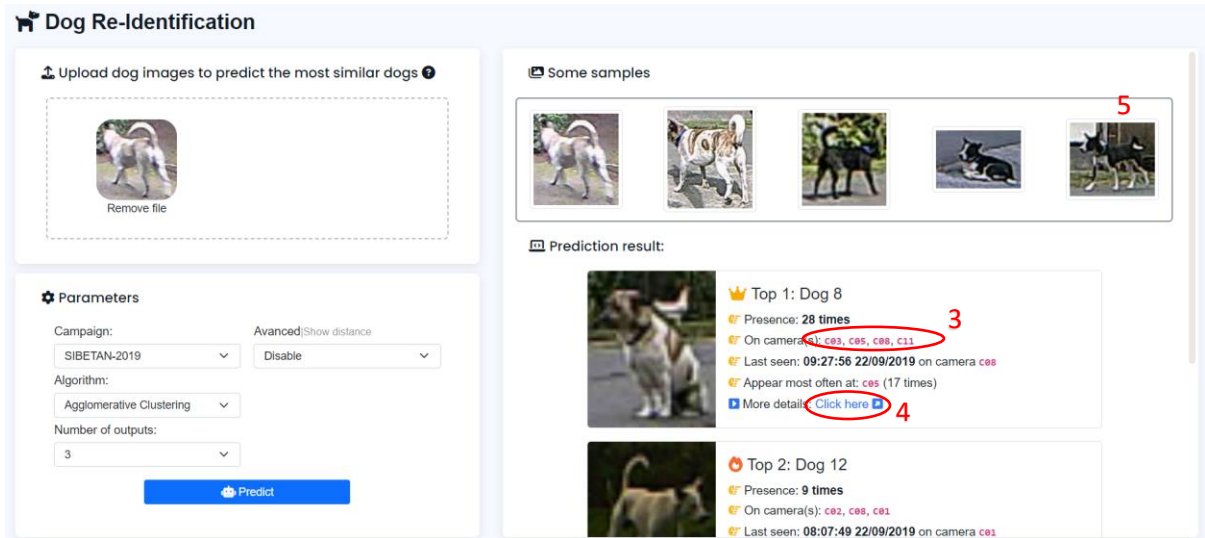
Figure I-18 Sample result

The figure above shows the result with 3 outputs. We can see some summarized information about the dogs.

[3]: you can hover on these cameras to see their positions during the campaign.

[4]: click it will navigate to Explore Data by Dog page (with the right panel showing the dog details)

[5]: some samples, you can drag these images to the drop zone to test it.
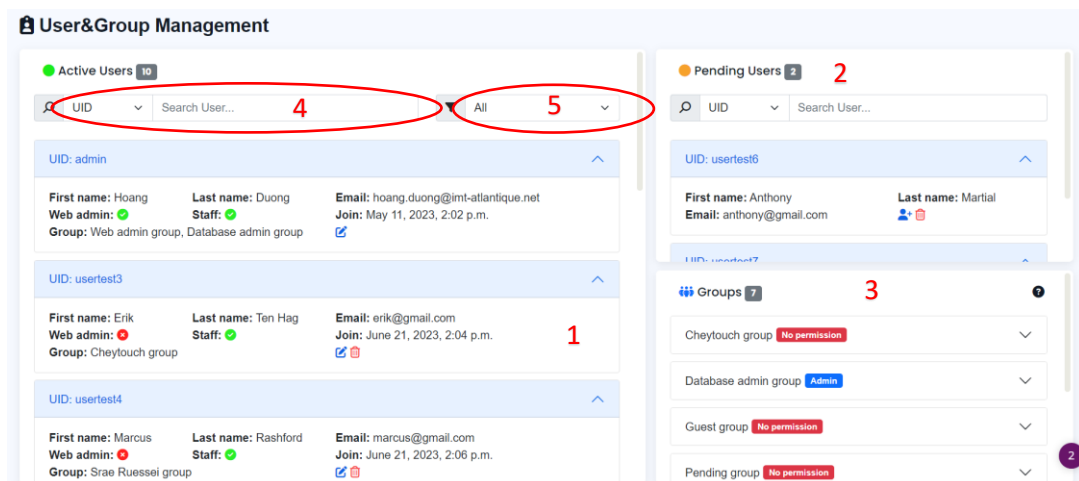
10. Admin page (ADMIN PERMISSION REQUIRED):

Figure I-19 Admin page UI

This page can be used to manage, authorize, activate, or assign user to specific groups.
[1]: active users. Modify a user by 🖉 or delete by 🗑.
Note: in this page,

- It is impossible to delete Database admin account or change their group.
- Can not grant Database admin role to any user.
- Can not delete your account by yourself.
- If you assign a user to the guest group, other groups (if any) will be ignored.

[2]: pending users, waiting for activation to be able to access pages. Activate a user by 👤⁺ or delete by 🗑

[3] user groups, containing permissions to access pages. For the moment, groups are divided based on available campaigns so that users belonging to that group can access only pages that visualize corresponding data. For example, users of Sibetan group can only view Sibetan data. On the other hand, this area will show group permissions. Web administrators cannot create new groups, nor modify permissions of groups. It is mandatory to carry out these tasks by Database administrators.

Note: 1 user can belong to many groups.

[4] Search bar for searching user by username (UID), last name, first name or email.

[5] Filter user by group