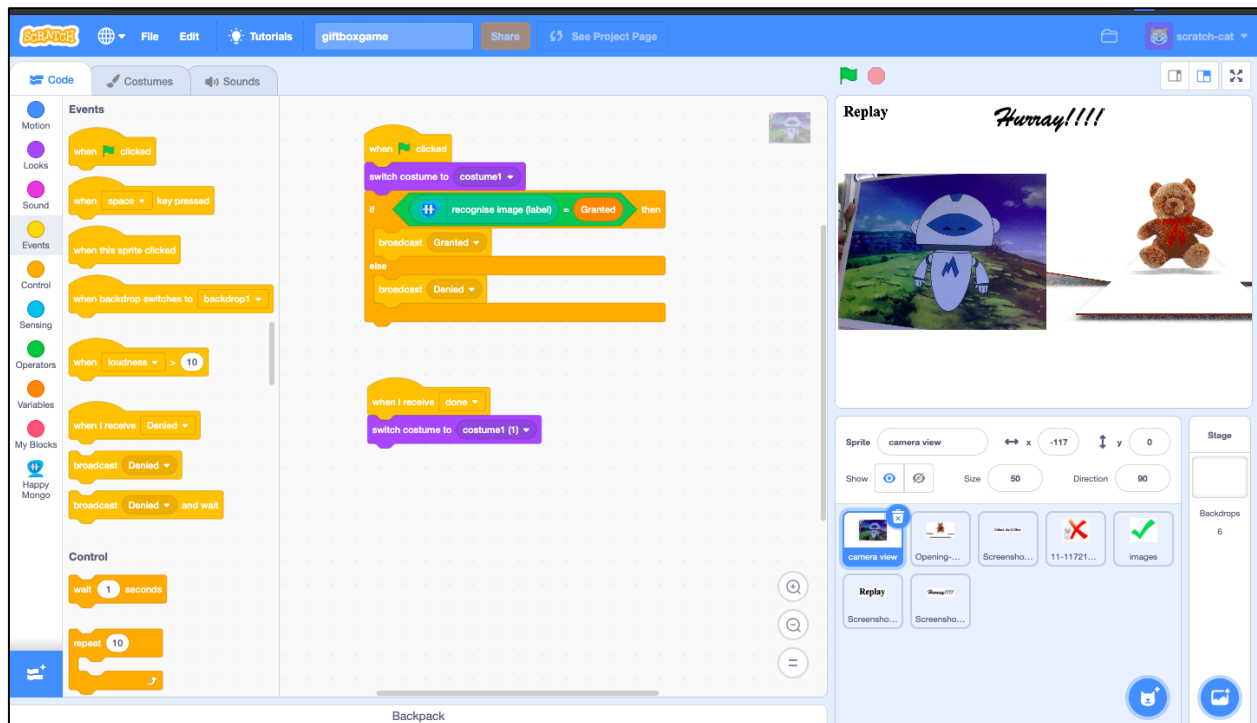


Gift Box

In this project you will make a Scratch project that can unlock a virtual gift box by recognizing your face.

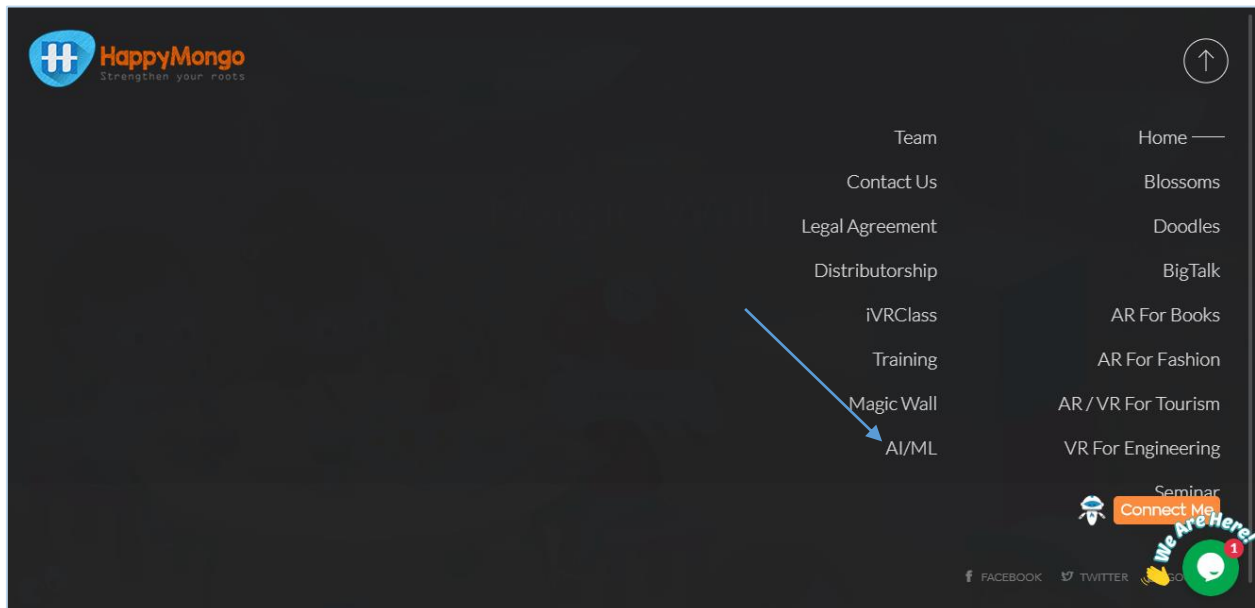
You will train a machine learning model to recognize your face so that it only unlocks the box for the right person.



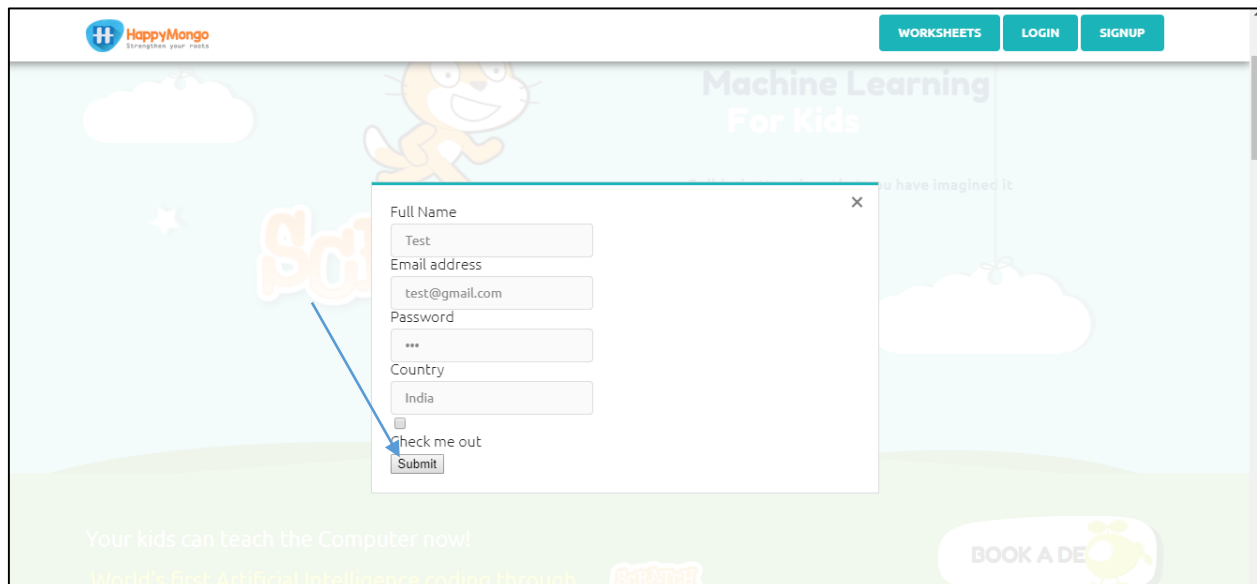
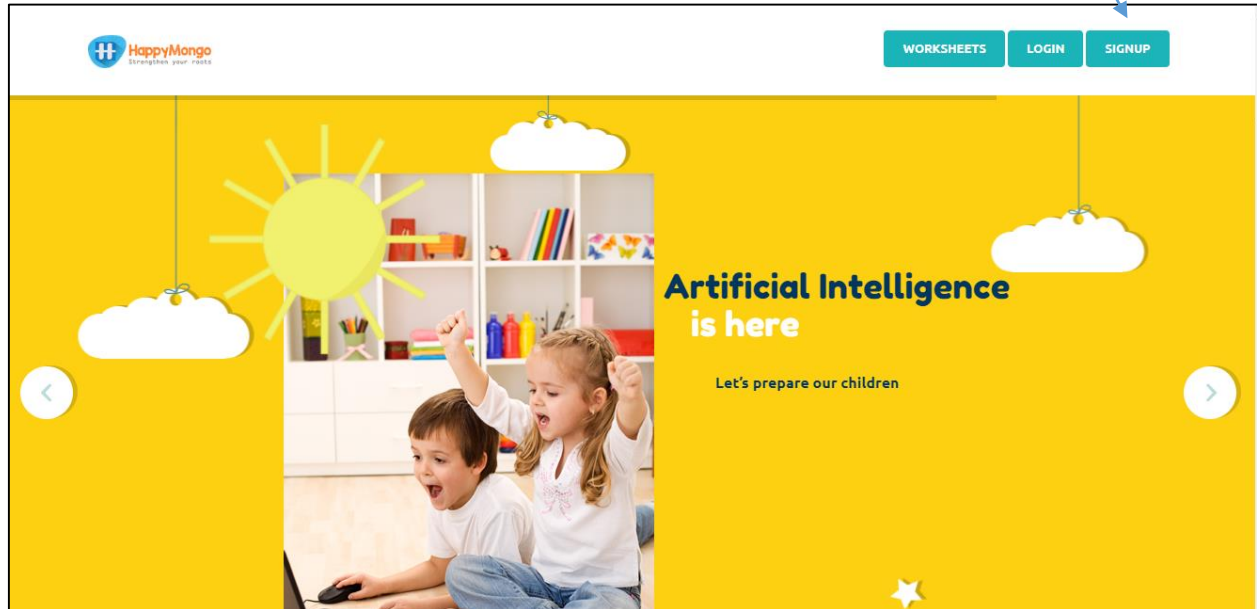
1. Go to <https://happymongo.com> in a web browser.
2. Click on the “menu” button.



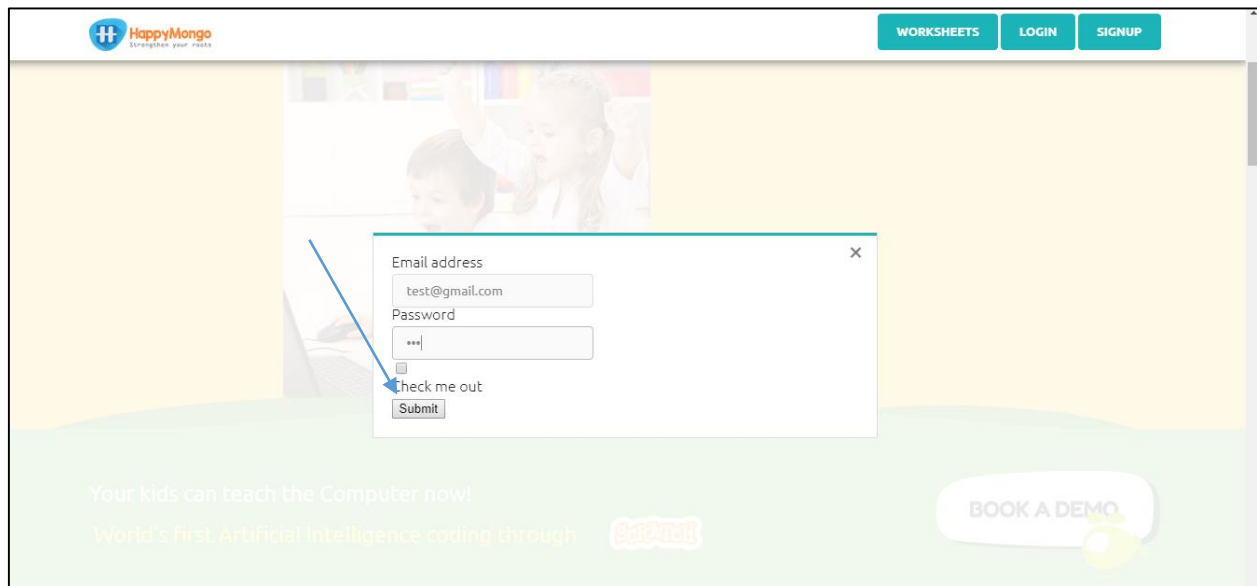
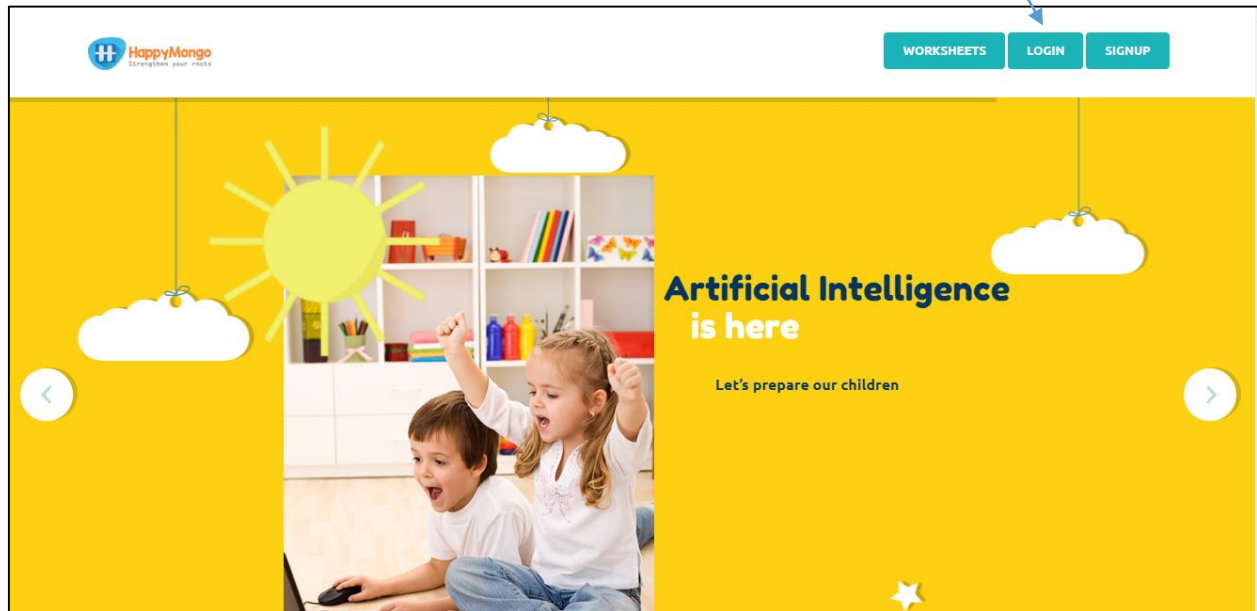
3. Click on “AI/ML” button.



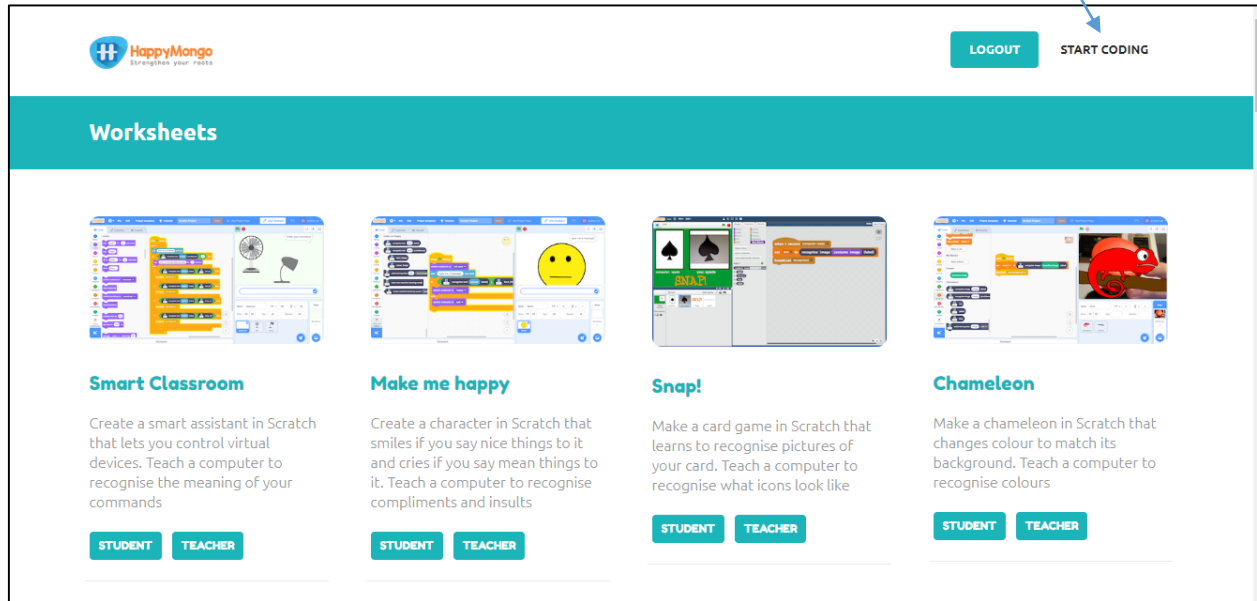
4. Click on **“Signup”** button. Enter all your details. Click on **“Submit”** button.



5. Click on “**Login**” button and type in your email address and password. Click on “**Submit**” button.

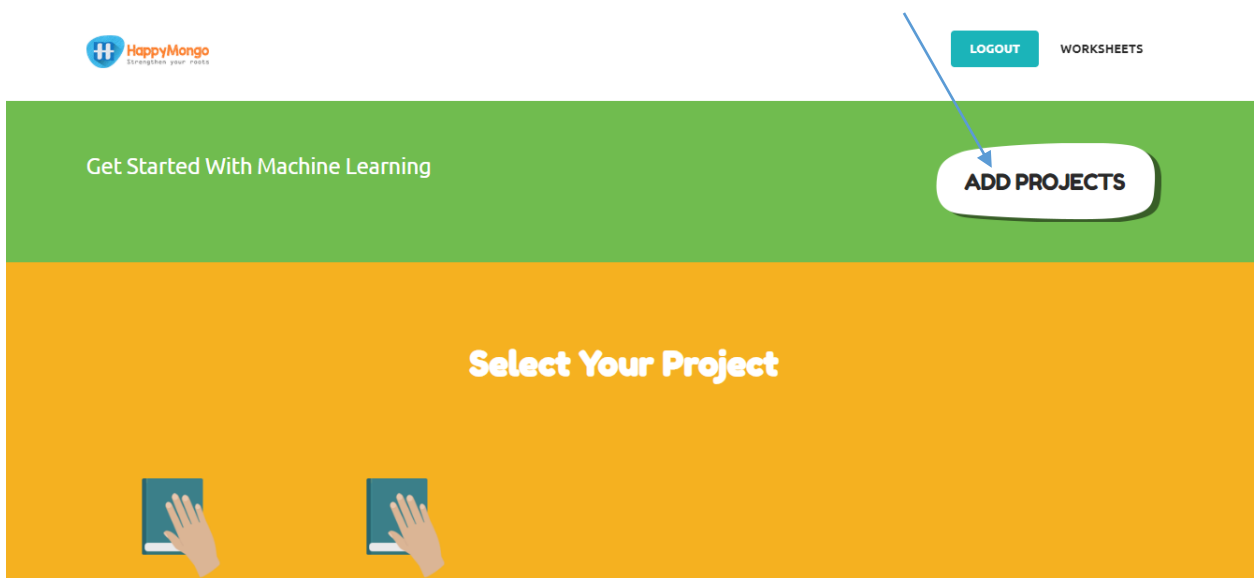


6. Click on “**Start coding**” button on the top menu bar.



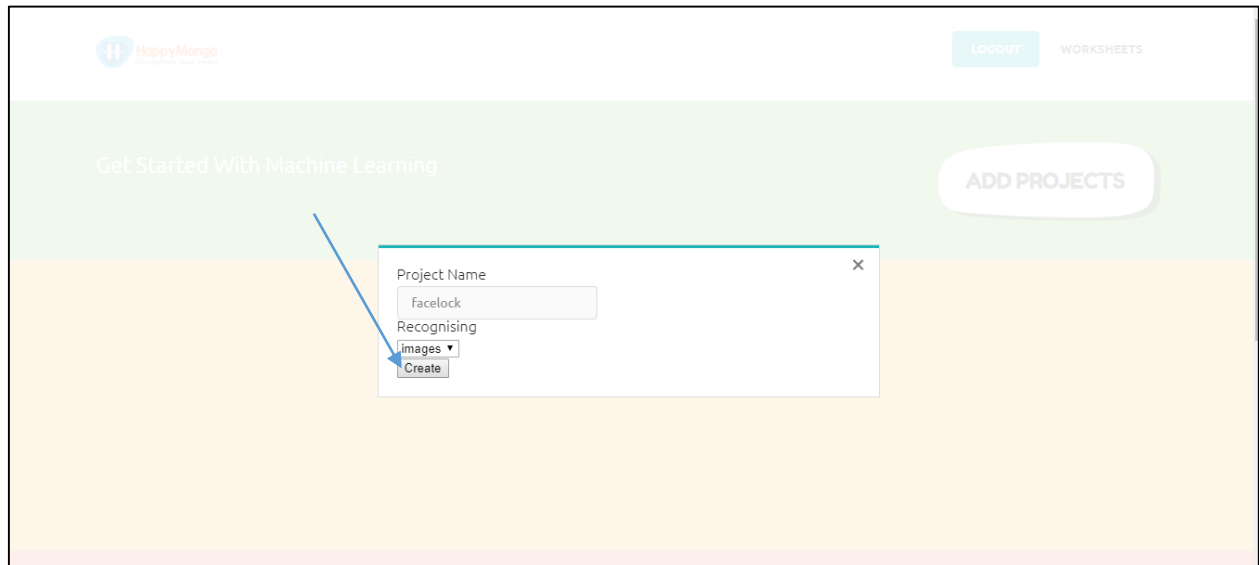
The screenshot shows the top navigation bar of the HappyMongo website. On the left is the HappyMongo logo with the tagline "Strengthen your skills". On the right are two buttons: "LOGOUT" and "START CODING". A blue arrow points from the text above to the "START CODING" button. Below the navigation bar is a teal header with the word "Worksheets". The main content area features four project cards, each with a Scratch project preview, a title, a description, and "STUDENT" and "TEACHER" buttons. The projects are: "Smart Classroom" (a smart assistant), "Make me happy" (a character that reacts to compliments and insults), "Snap!" (a card game), and "Chameleon" (a chameleon that changes color).

7. Click on “**Add projects**” button

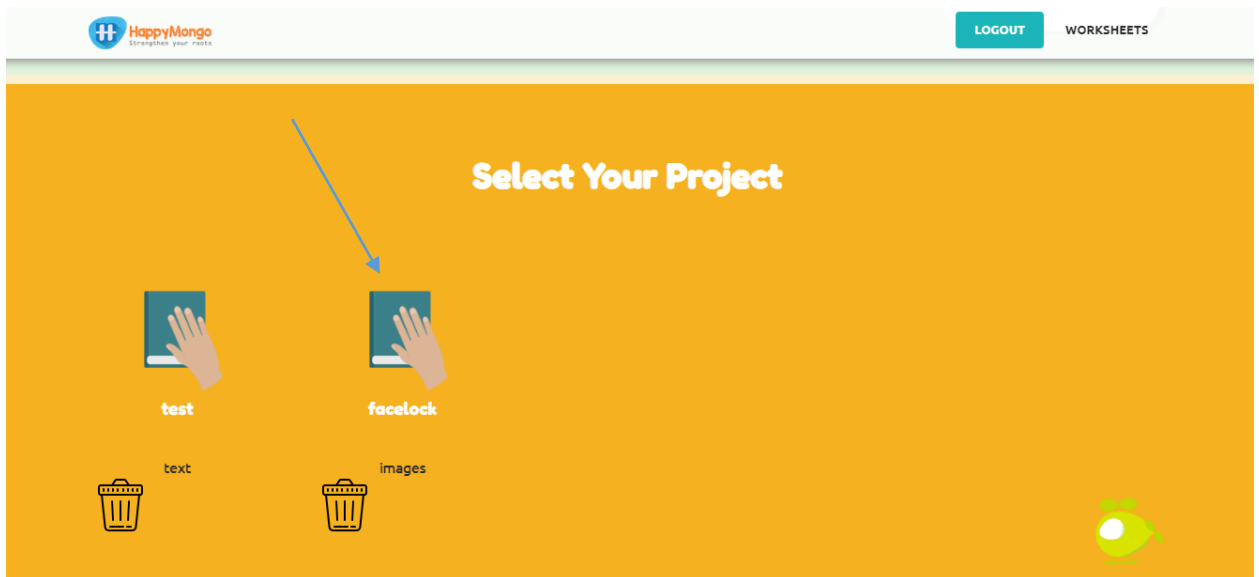


The screenshot shows the top navigation bar of the HappyMongo website. On the left is the HappyMongo logo with the tagline "Strengthen your skills". On the right are two buttons: "LOGOUT" and "WORKSHEETS". A blue arrow points from the text above to the "ADD PROJECTS" button, which is a white rounded rectangle with a drop shadow. Below the navigation bar is a green header with the text "Get Started With Machine Learning". The main content area has an orange background with the text "Select Your Project" in white. At the bottom, there are two icons of hands holding blue books.

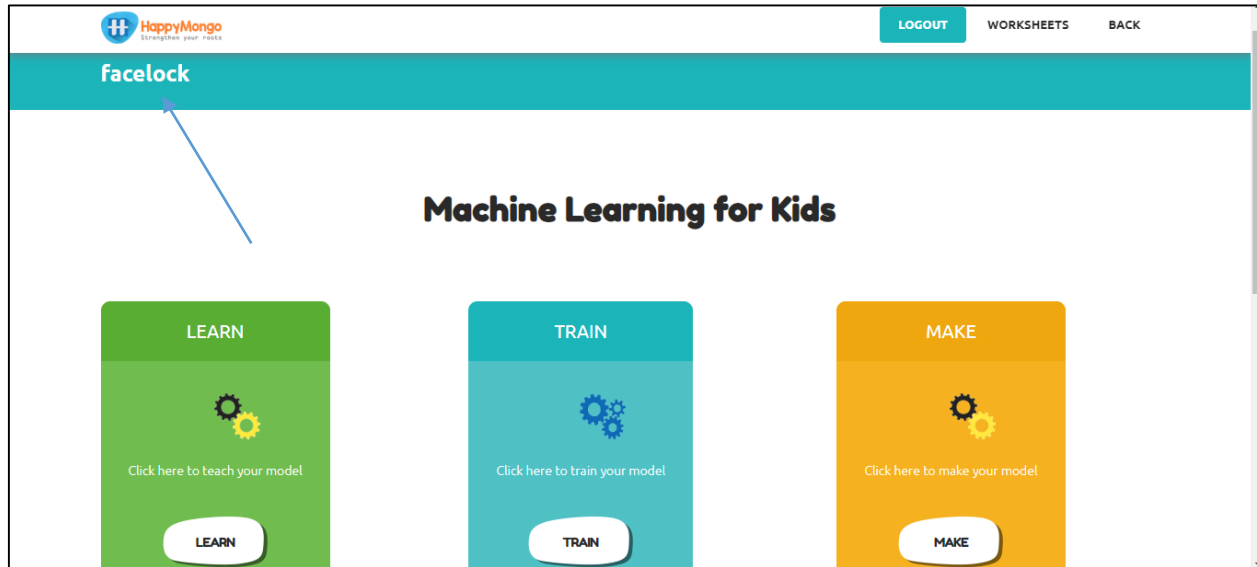
8. Name your project “Facelock” and set it to learn how to recognize “images” format. Click the “Create” button.



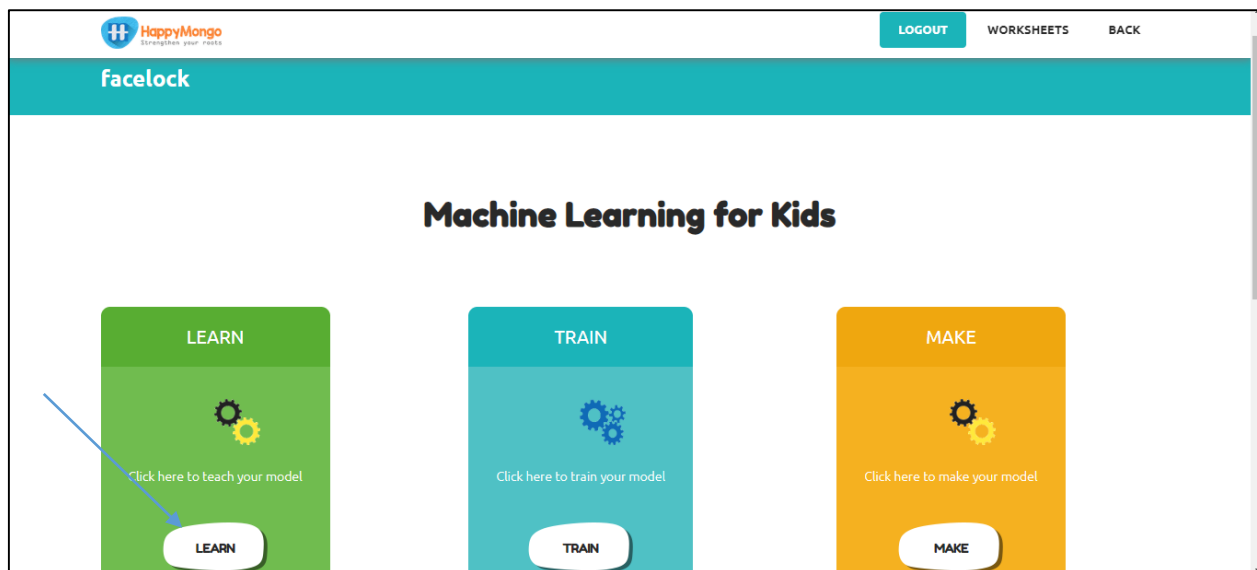
9. Now you can see “facelock” listed in your projects. Click on it.



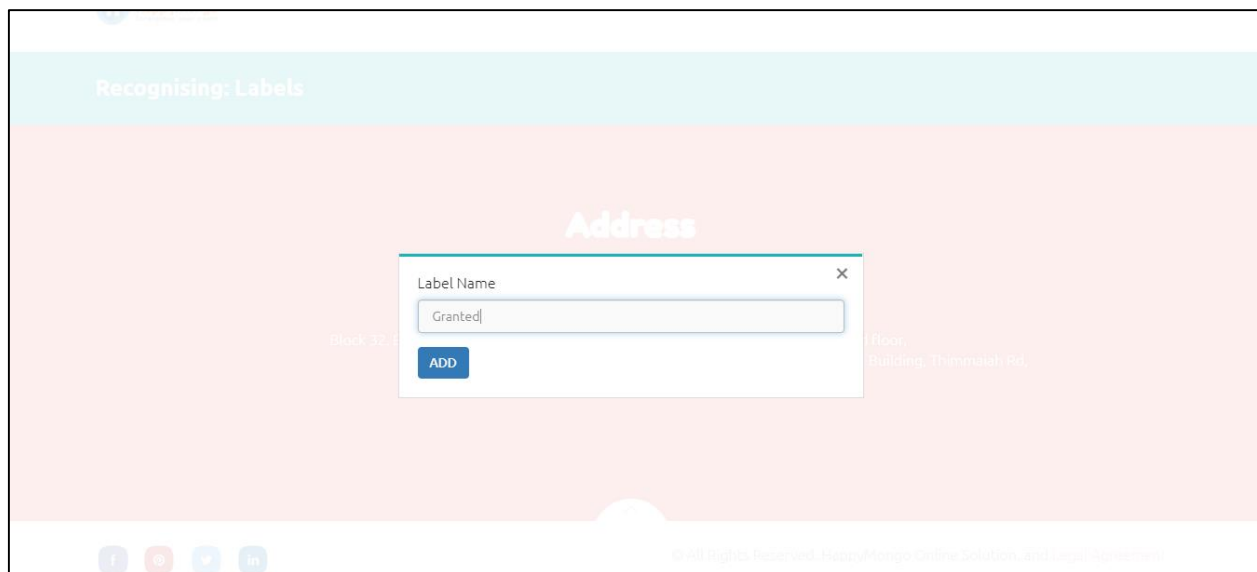
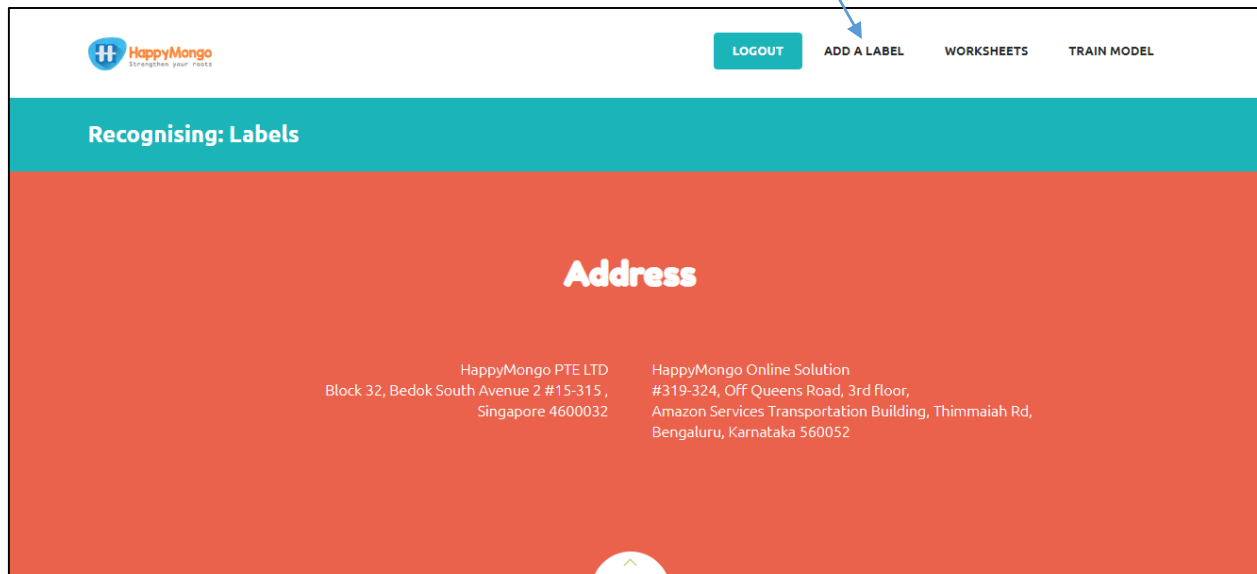
10. Now you can see the project name “**facelock**” on the title bar.



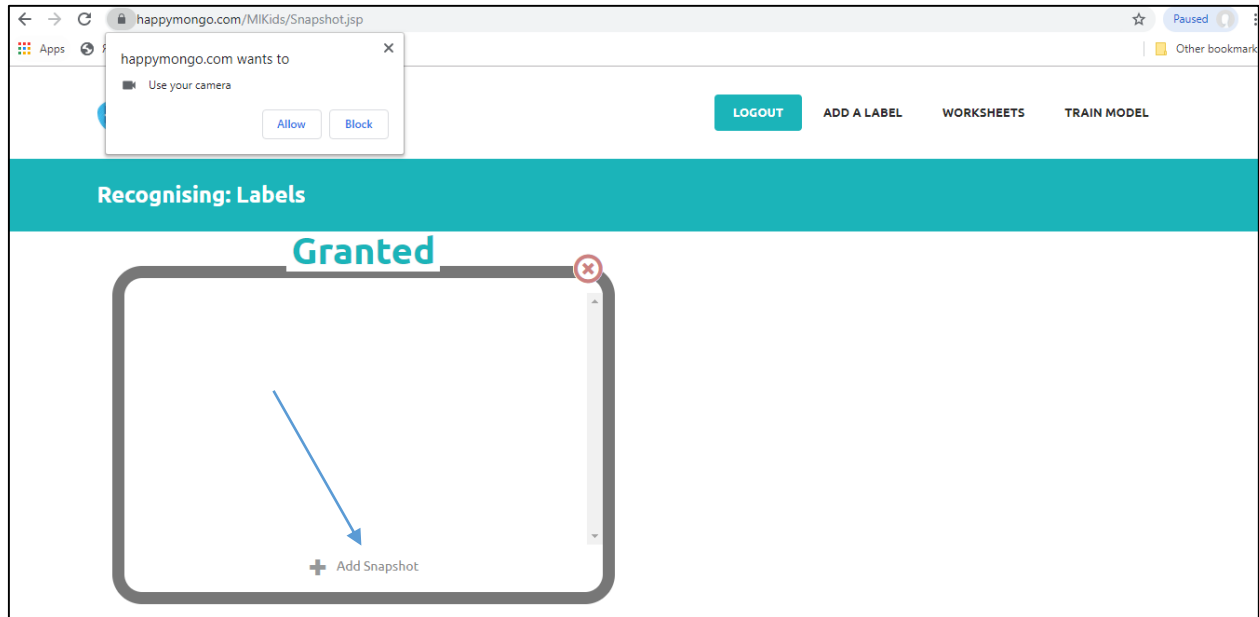
11. Click on “**Learn**” button.



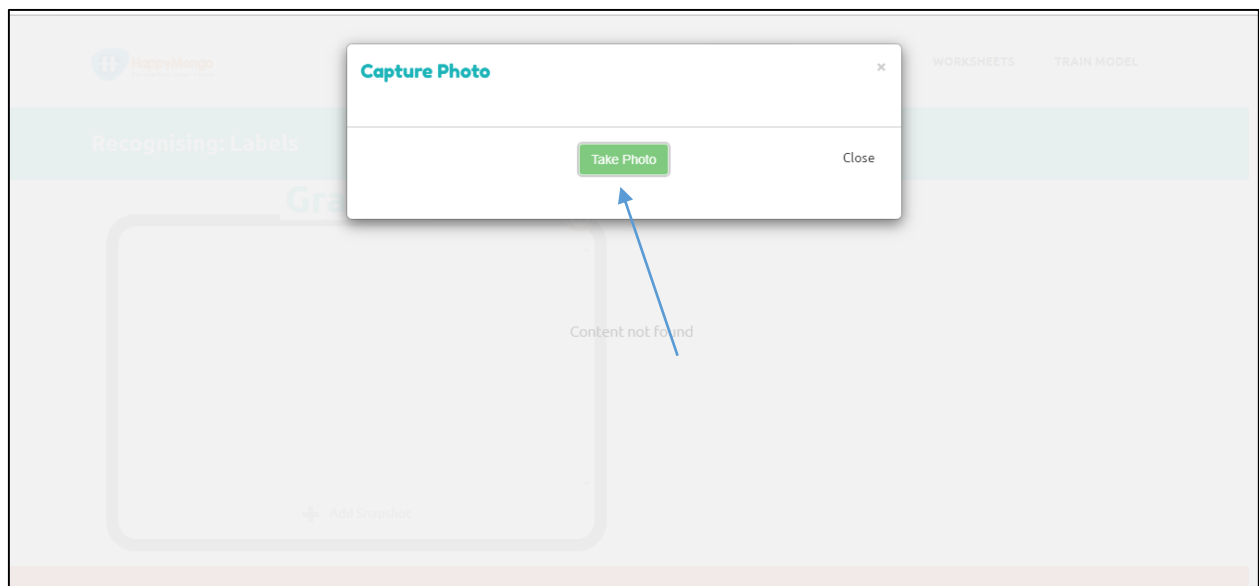
12. Click on **“Add a Label”**. Create a bucket called **“Granted”**.



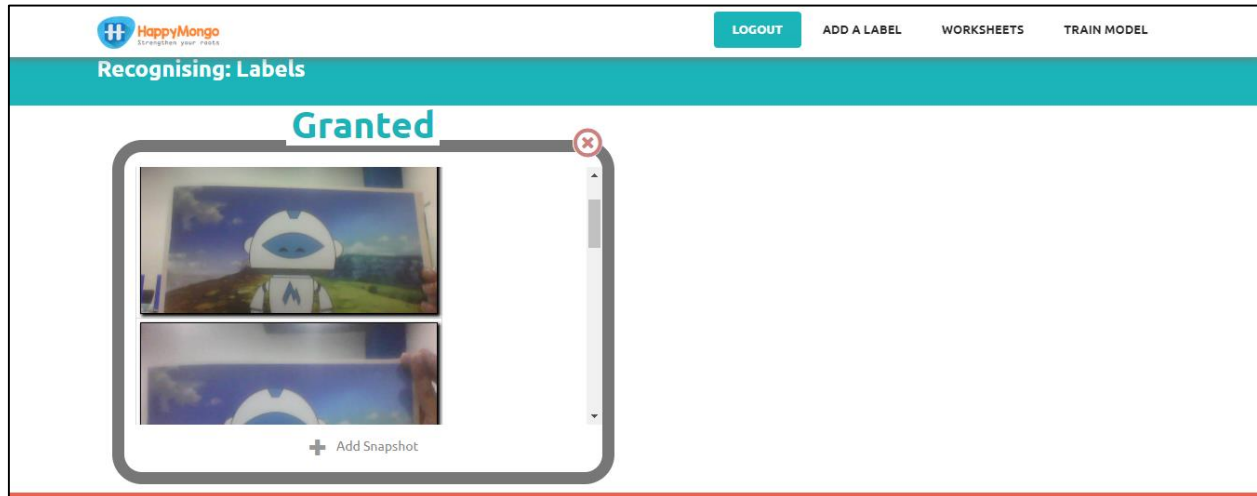
13. Click on **“Add snapshots”**. If your web browser asks permission to use your webcam, you will need to click **“Allow”** in the pop-up window. Then a preview window will show the current view of your webcam.



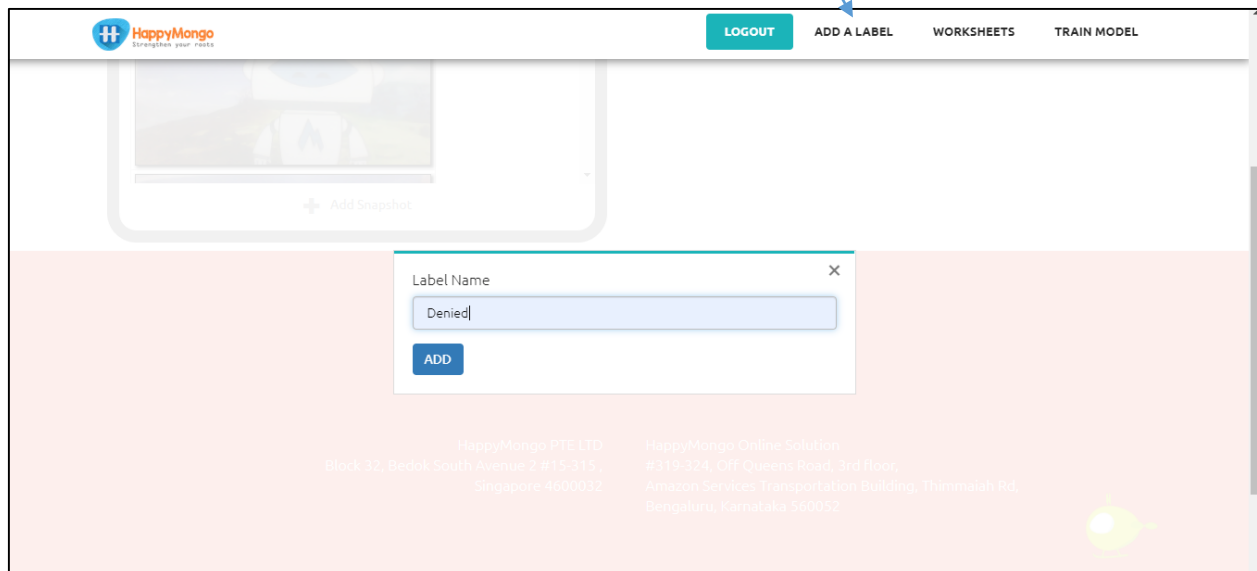
14. Capture a snapshot of your face by clicking on **“Take photo”** to take a picture of it. Make sure you have parental or teacher’s permission to upload photos of your face. If you don’t have permission use a toy.



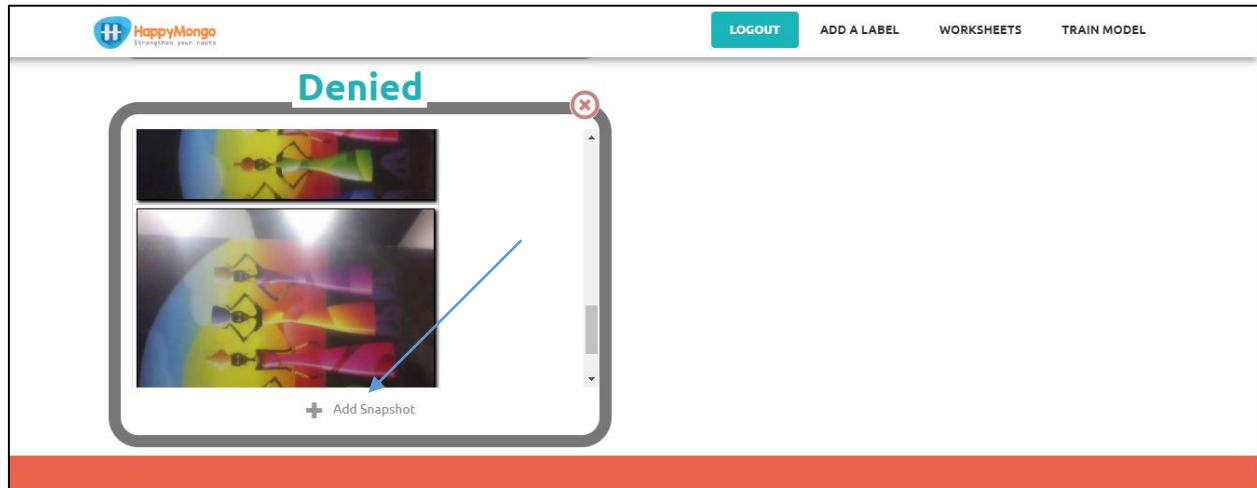
15. Repeat until you have got at least 10 snapshots of your face or toy. Take pictures with different backgrounds, angles, focuses, and distance from the webcam. The more variation the computer has to learn from, the better.



16. Click on **“Add a Label”**. Create a bucket called **“Denied”**.

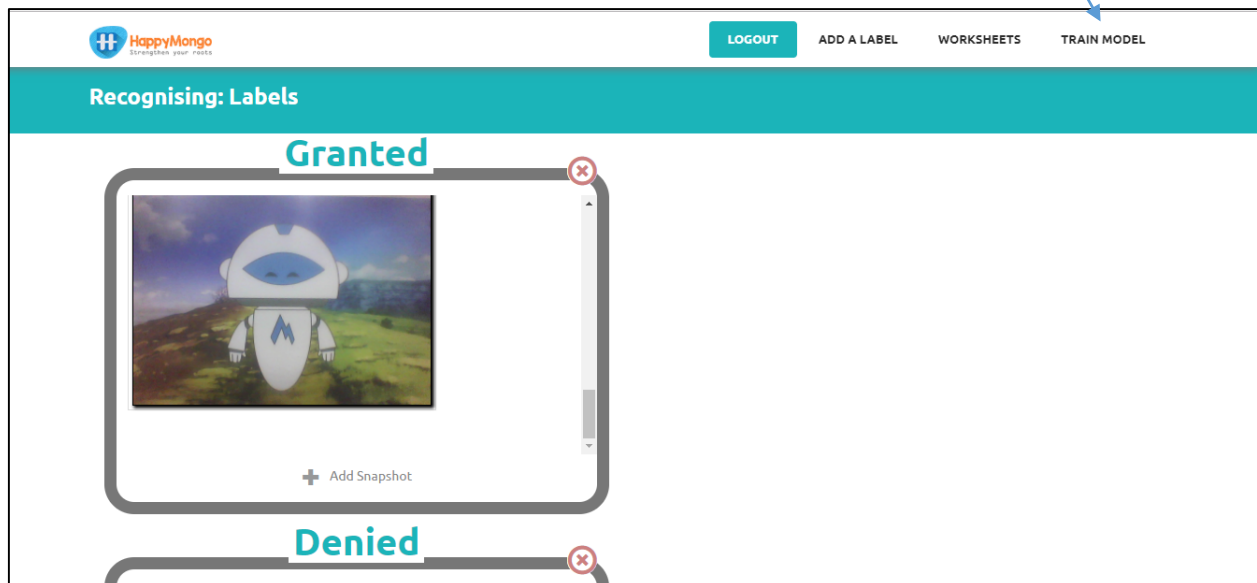


17. Use the **“Add snapshots”** button in the denied bucket to take 10 photos of other people’s faces or toy.

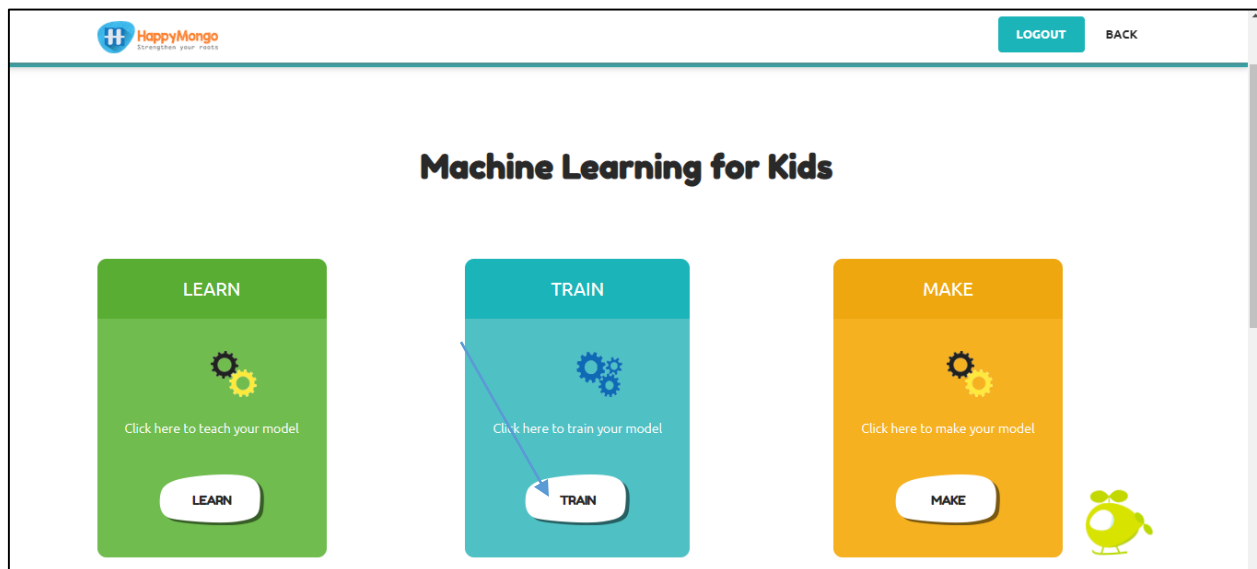


Try to vary these pictures in the same way that you varied your first set.

18. Click on **“Train model”** button.

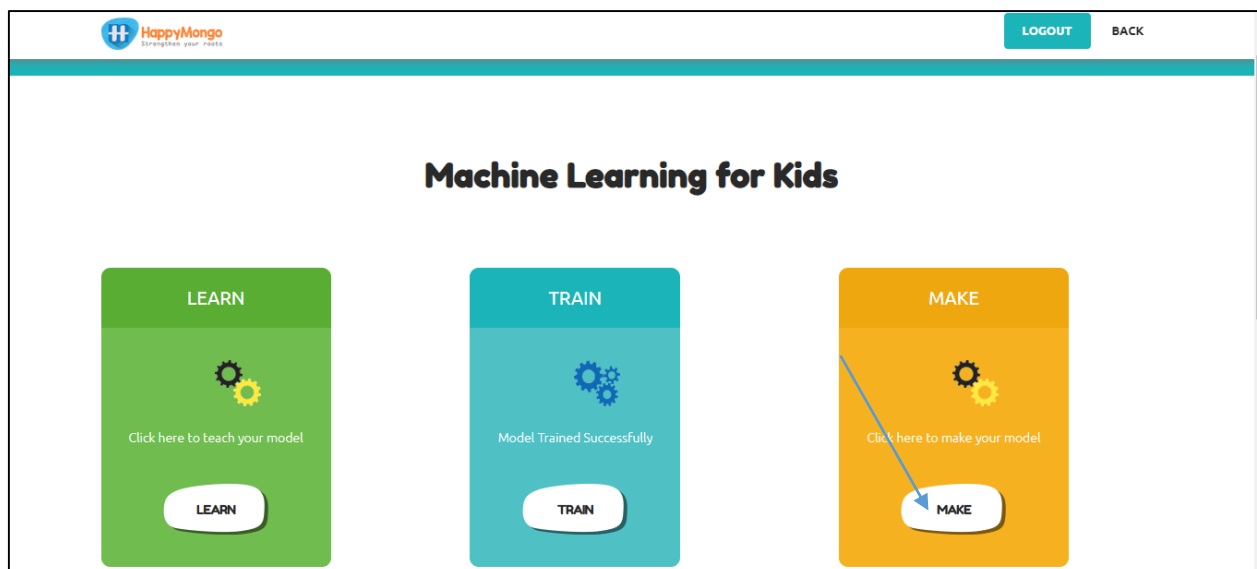


19. Click the “Train” button.

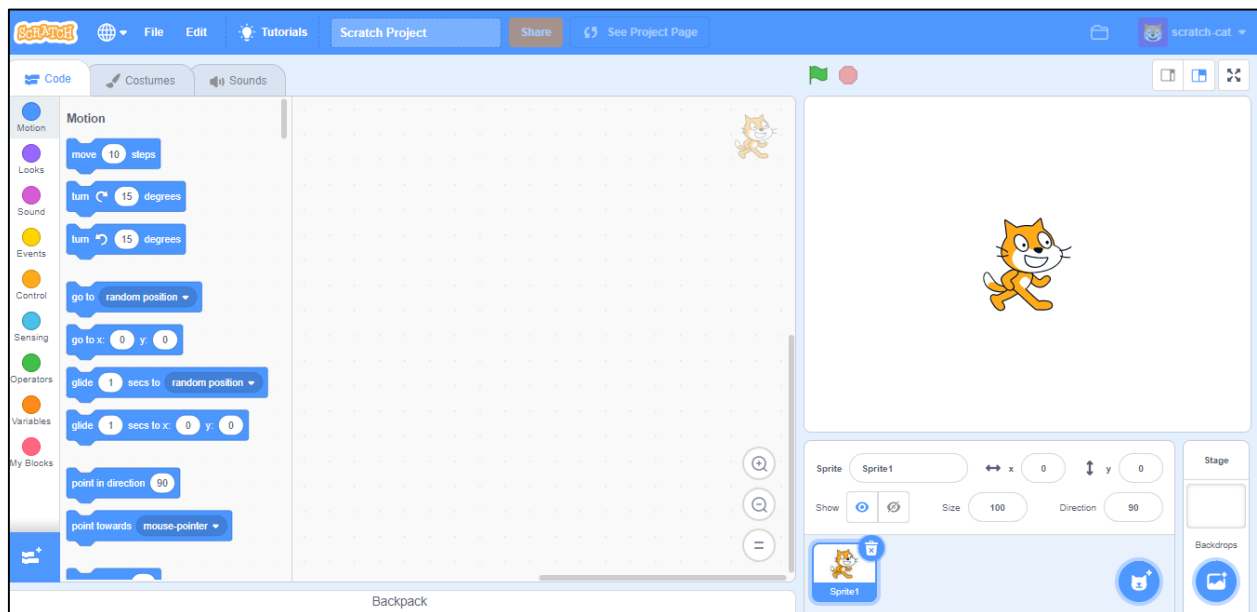


20. Wait for the training to complete.

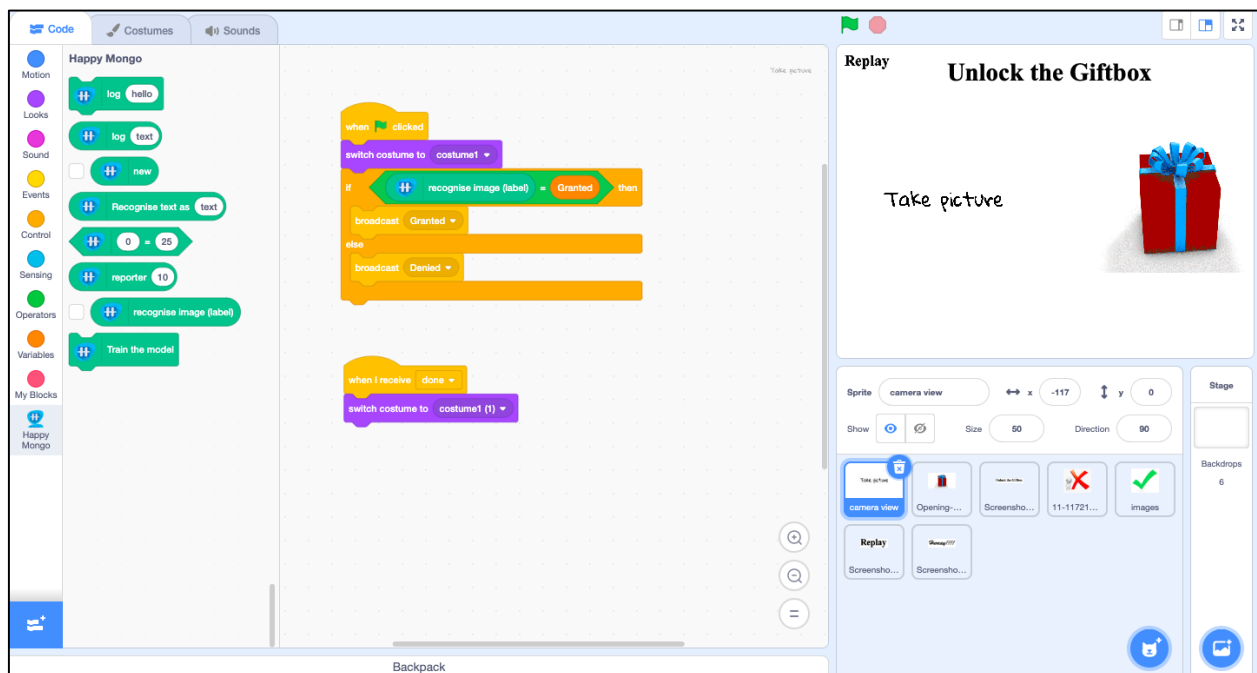
21. Click on “Make” button.



22. The Scratch editor will open.



23. Click the “code” tab and enter the following script.



24. Save your project. Click on **File** -> **Save to your computer** to save the project to a file.

25. Click the “**green flag**” to test.

