

ACTIVITY SHEET



SESSION 5

Finger Tracing with AI

In this activity, we will learn how to trace a ball sprite in the stage region of PictoBlox with our finger. For this, in this session, we will perform detection of human body part from the camera.

This activity sheet belongs to _____

MATERIALS REQUIRED

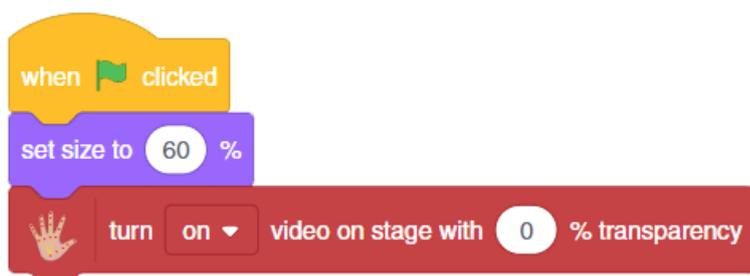
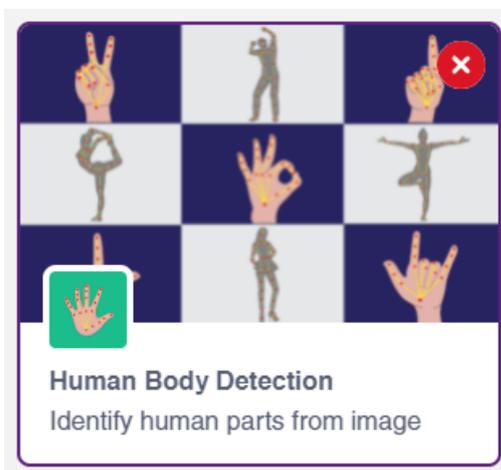
- Computer / Tab / Laptop with **PictoBlox** Installed.

HUMAN BODY DETECTION

With PictoBlox “**Human Body Detection**” ability, you can track your different hand parts location from images.

STEP-BY-STEP

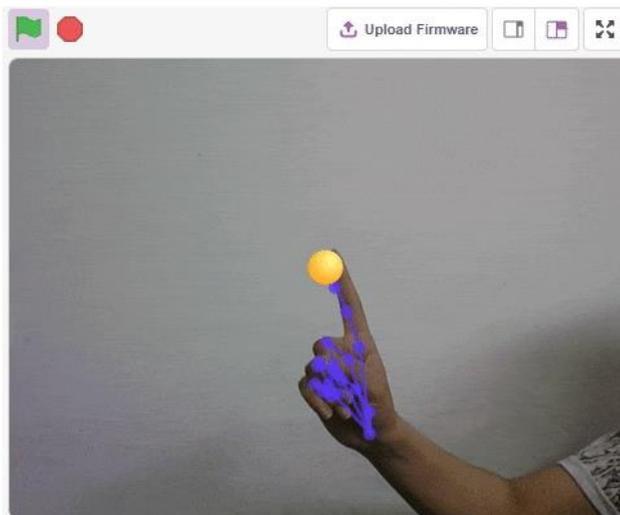
1. Create a New file in PictoBlox. Open **PictoBlox** and create a new file. Select the coding environment as **Block Coding**.
2. Click the **Choose a Sprite** button. Select the **Ball** sprite from the library.
3. Right-click on **Tobi** sprite, and click on delete icon to delete the **Tobi** sprite.
4. Click on the **Add Extension** button (bottom left) and add the **Human Body Detection** Extension to your palette.
5. Add a **when green flag clicked** block from the **Events** palette on the scripting area.
6. Add **set size to () %** block from the **Looks** palette below the **when green flag clicked** block. Set the size as **60%**.
7. In this activity, we will be moving our hand in the air and the drawings will be traced on the screen. But for this, first, we need to turn the camera on, thus add a **turn (on) video on stage with (0) %**



STEP 2

transparency block from the **Human Body Detection** palette.

8. Add a **forever** block from the **Control** palette to run the script continuously, until you stop the program by pressing the stop button (Big red button besides the green flag).
9. Now, we need to store the details of our hand using the camera of our device, so that we can track our hand on the stage. For this we need to add **analyse image for hand from camera** block from the **Human Body Detection** palette.
10. Next, we need to check whether our hand is detected or not. Thus, we place an **if () then** block from the **Controls** palette.
11. Then we add **is hand detected** block, inside the **if () then** block as a condition.
12. We will be using the tip of our index finger to control the ball and move it around. For this, we will use **set x to ()** block and **set y to ()** block from the **Motion** palette inside the **if** block.



13. Now, we will place the **(x) position of ()** block from the **Human Body Detection** palette into the **set x to ()** block. From the last dropdown, we will select **top of index finger**.
14. Lastly, we add **set y to ()** block, inside this we will place the **(x) position of ()** block but this time instead of **(x)** we choose **(y)** from the dropdown. Here also, from the last dropdown, we will select **top of index finger**.
15. Maximize the stage and test the script!

SAVING THE PROGRAM

Save the project file as **Finger Tracing with AI**. Check page 3 if you missed how to save the project.

