

# Auto Pose Robot

# Introduction





A Robot is an automatic machine designed to carry out a task. The Auto pose robot helps to control the robot through possess made by the human being. The integration of STEMBOT and google teachable platform is done to capture and detect the possess. The STEMBOT is trained by some possess to move in forward, backward, left, and right directions. After detecting the possess, the STEMBOT then operates the motors.

## Step 1: - Train the robot using pose project

≡ Teachable Machine

### New Project

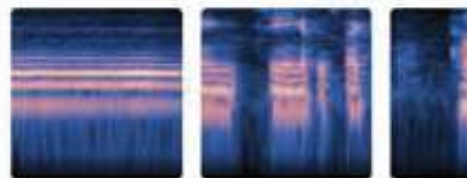
 Open an existing project from Drive.

 Open an existing project from a file.



#### Image Project

Teach based on images, from files or your webcam.



#### Audio Project

Teach based on one-second-long sounds, from files or your microphone.

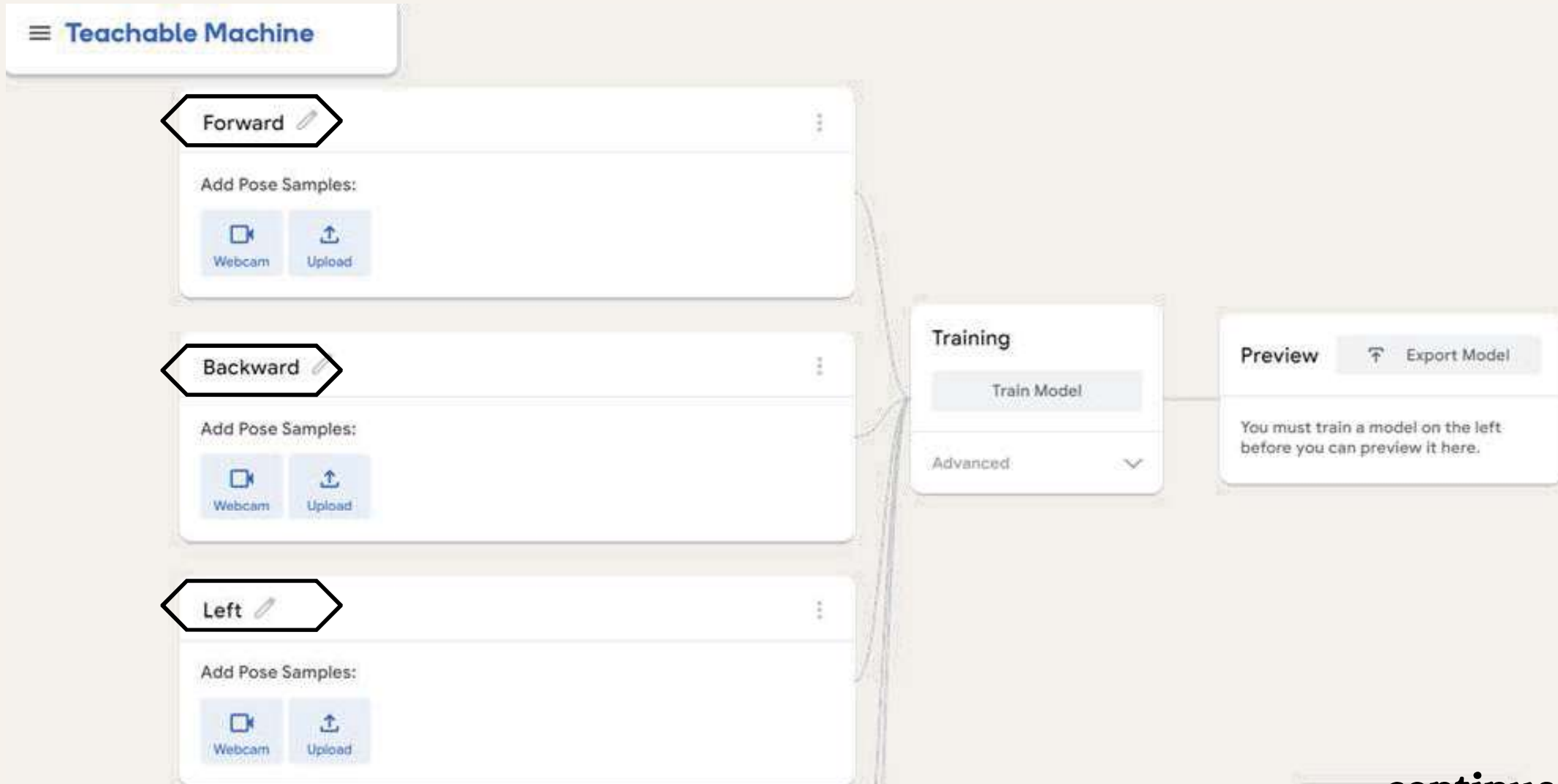


#### Pose Project

Teach based on images, from files or your webcam.

**continue to next. . . .**

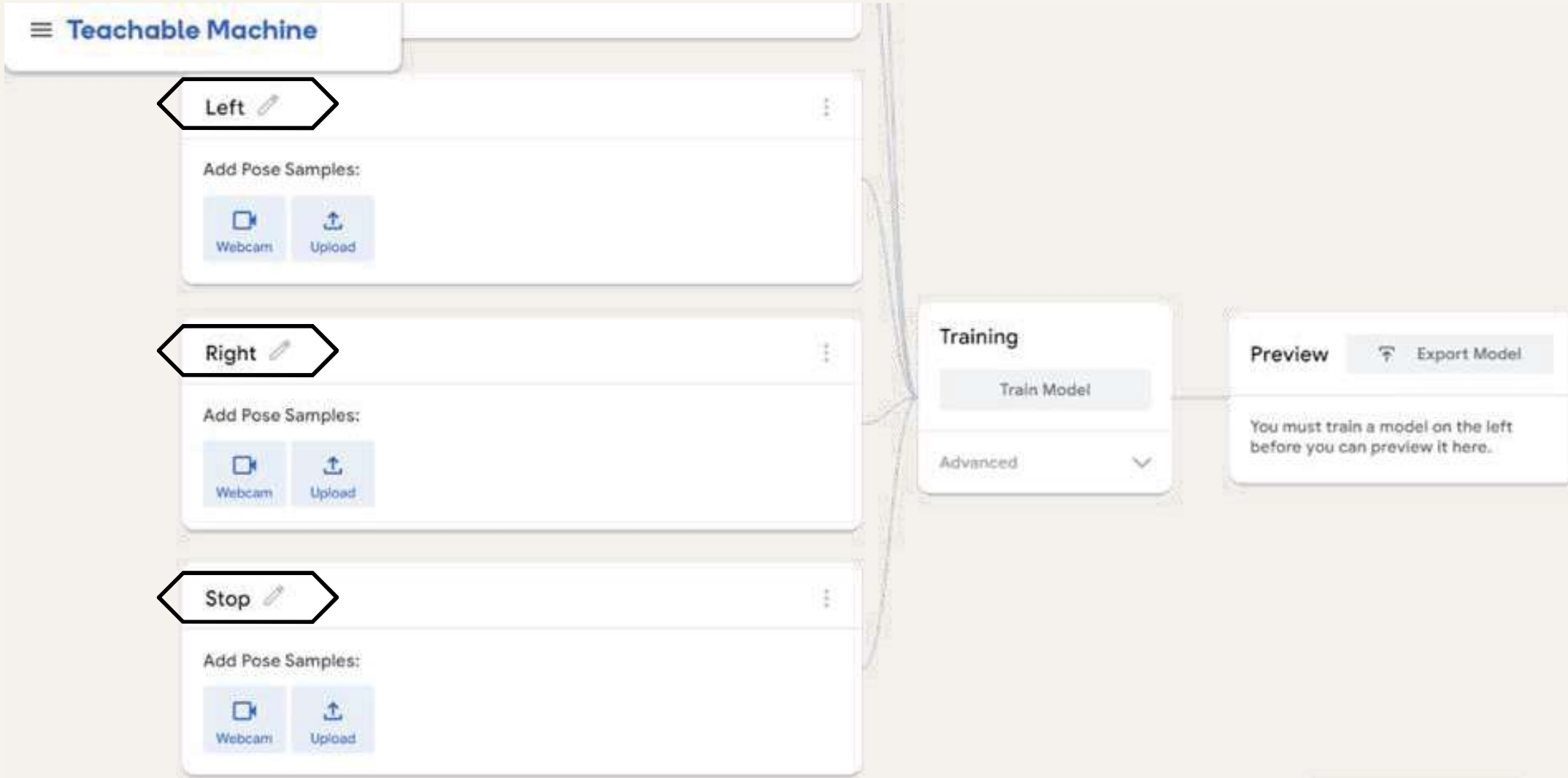
Step 2: - Create 5 classes named Forward, Backward, Left, and Right, Stop.




The screenshot displays the Teachable Machine web interface. On the left, three class creation panels are visible, each with a header (Forward, Backward, Left), a sub-header 'Add Pose Samples:', and two buttons: 'Webcam' and 'Upload'. The 'Forward' class header is highlighted with a black hexagonal border. To the right of these panels is the 'Training' panel, which contains a 'Train Model' button and an 'Advanced' dropdown menu. Further right is the 'Preview' panel, which includes an 'Export Model' button and a message: 'You must train a model on the left before you can preview it here.'

continue to next....

Step 2: - Create 5 classes named Forward, Backward, Left, and Right, Stop.




Teachable Machine

Left 


Add Pose Samples:

Webcam Upload

Right 

Add Pose Samples:

Webcam Upload


Stop 


Add Pose Samples:

Webcam Upload

Training

Train Model

Advanced 

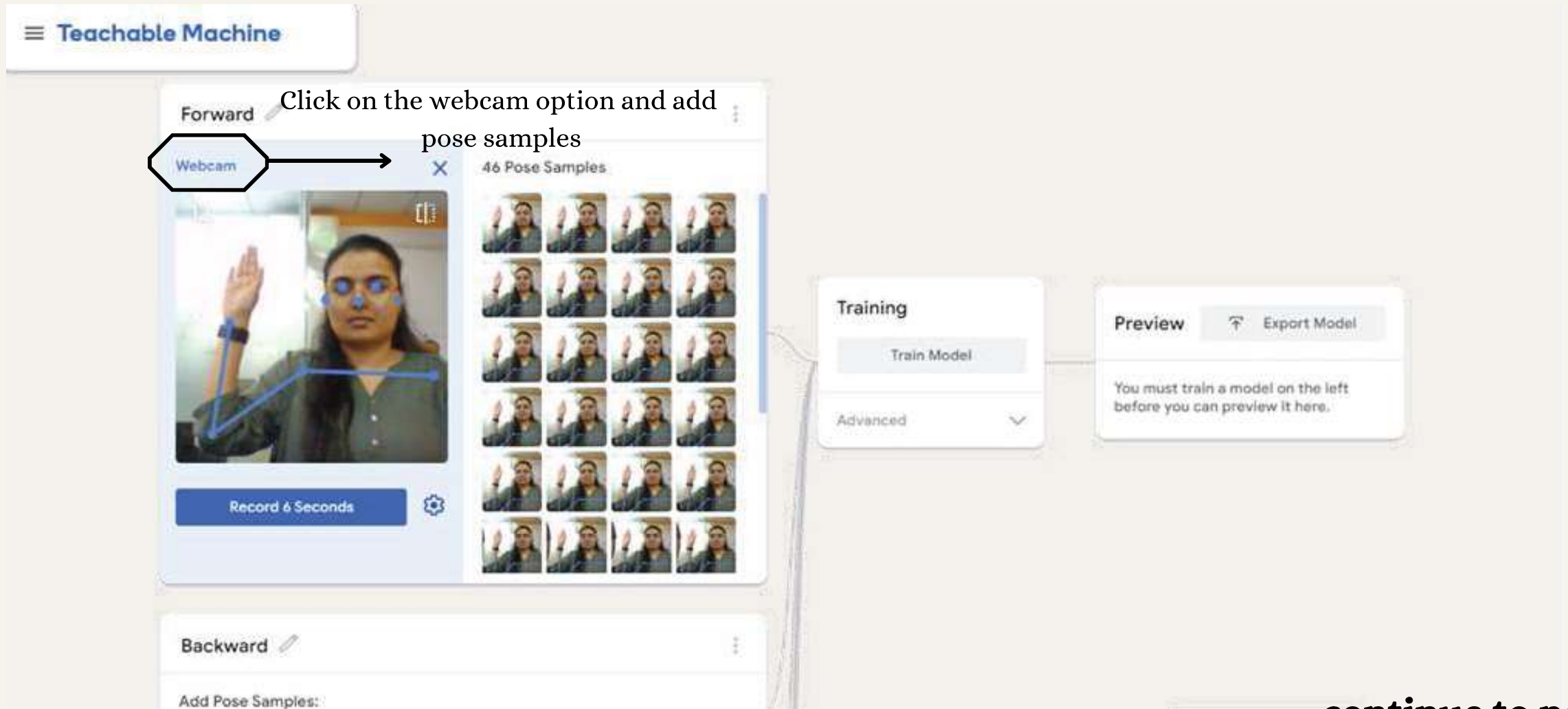
Preview  Export Model

You must train a model on the left before you can preview it here.

continue to next....

## Step 3: - Add pose samples.

### Forward



Teachable Machine

Forward

Click on the webcam option and add pose samples

Webcam

46 Pose Samples

Record 6 Seconds

Backward

Add Pose Samples:

Training

Train Model

Advanced

Preview

Export Model

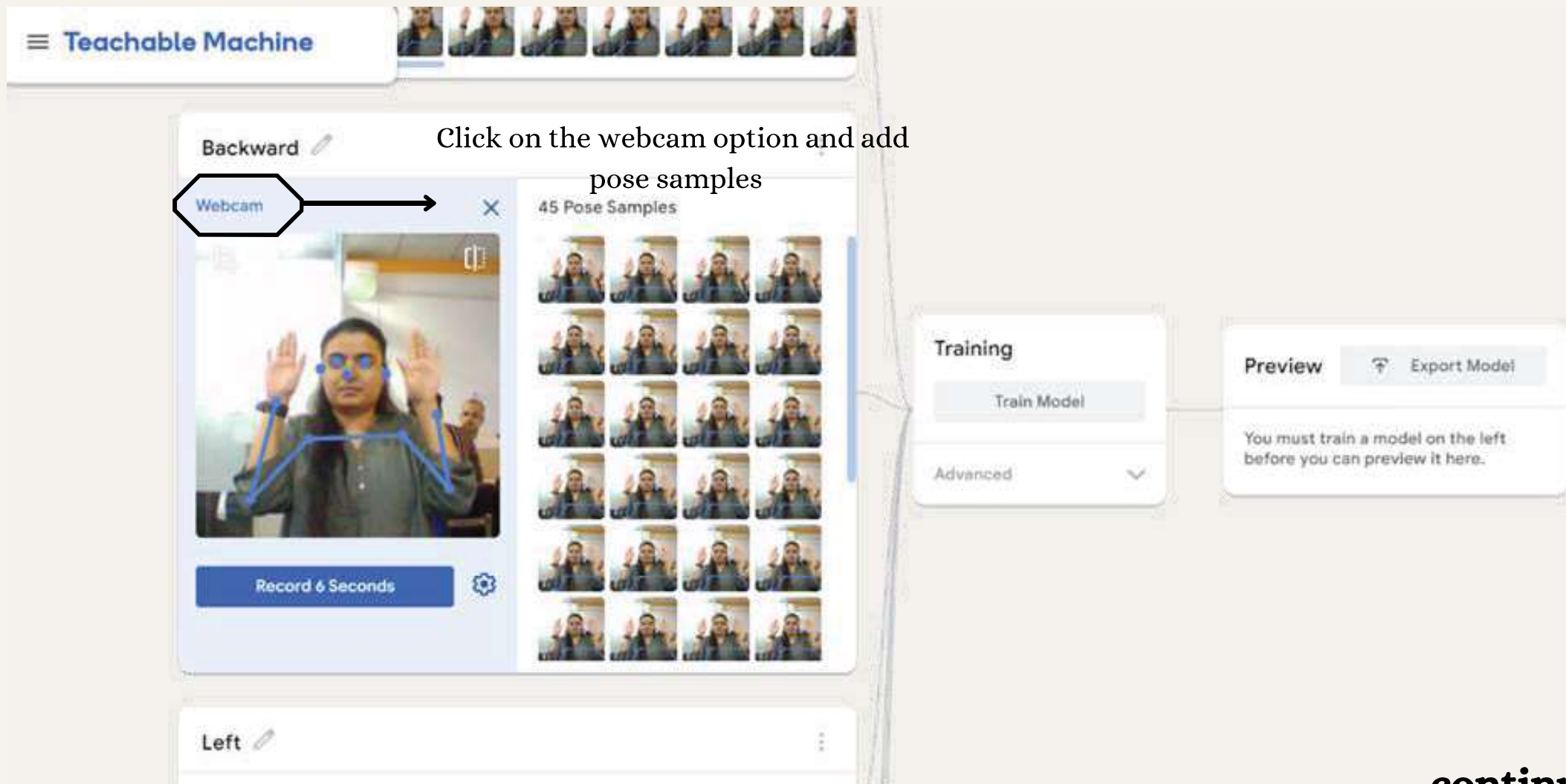
You must train a model on the left before you can preview it here.

**continue to next....**



## Step 3: - Add pose samples.

### Backward



The screenshot shows the 'Teachable Machine' interface. At the top, there's a header with a menu icon and the text 'Teachable Machine'. Below this, there's a row of small thumbnail images showing different poses. The main area is divided into two sections: 'Backward' and 'Left'. The 'Backward' section is active, showing a large video feed of a person making a 'backward' pose with their hands raised. To the right of the video feed is a grid of 45 small thumbnail images, each showing the same pose. Above the grid, it says '45 Pose Samples'. Below the video feed, there's a button that says 'Record 6 Seconds' and a gear icon. To the right of the 'Backward' section, there's a 'Training' panel with a 'Train Model' button and an 'Advanced' dropdown menu. To the right of the 'Training' panel, there's a 'Preview' panel with an 'Export Model' button and a message that says 'You must train a model on the left before you can preview it here.'.

Click on the webcam option and add pose samples

Webcam

45 Pose Samples

Record 6 Seconds

Training

Train Model

Advanced

Preview

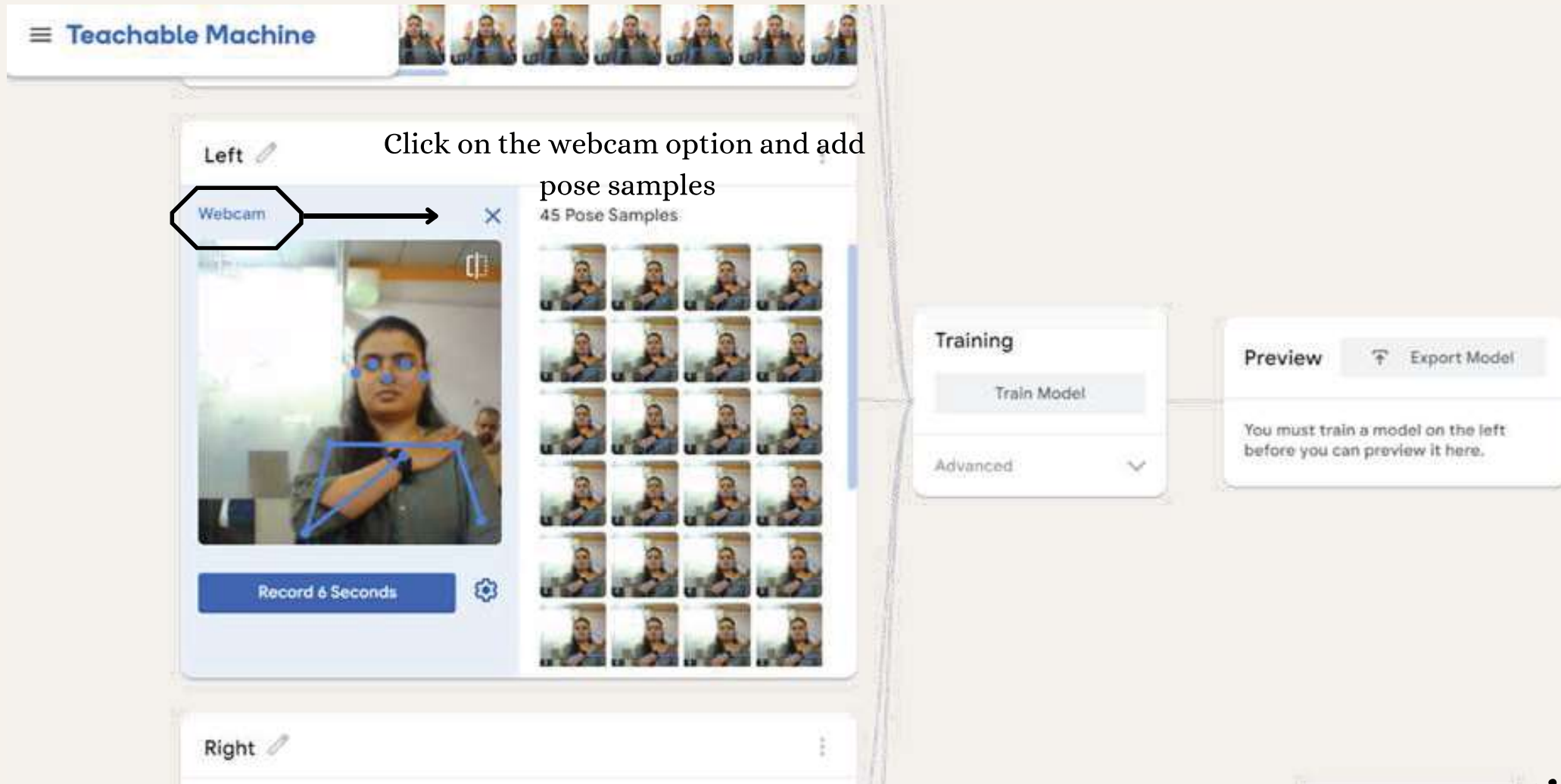
Export Model

You must train a model on the left before you can preview it here.

continue to next....

## Step 3: - Add pose samples.

Left



Teachable Machine

Left

Webcam

Click on the webcam option and add pose samples

45 Pose Samples:

Record 6 Seconds

Training

Train Model

Advanced

Preview

Export Model

You must train a model on the left before you can preview it here.

continue to next....



## Step 3: - Add pose samples.

Right

Teachable Machine

Click on the webcam option and add pose samples

Webcam

46 Pose Samples

Record 6 Seconds

Training

Train Model

Advanced

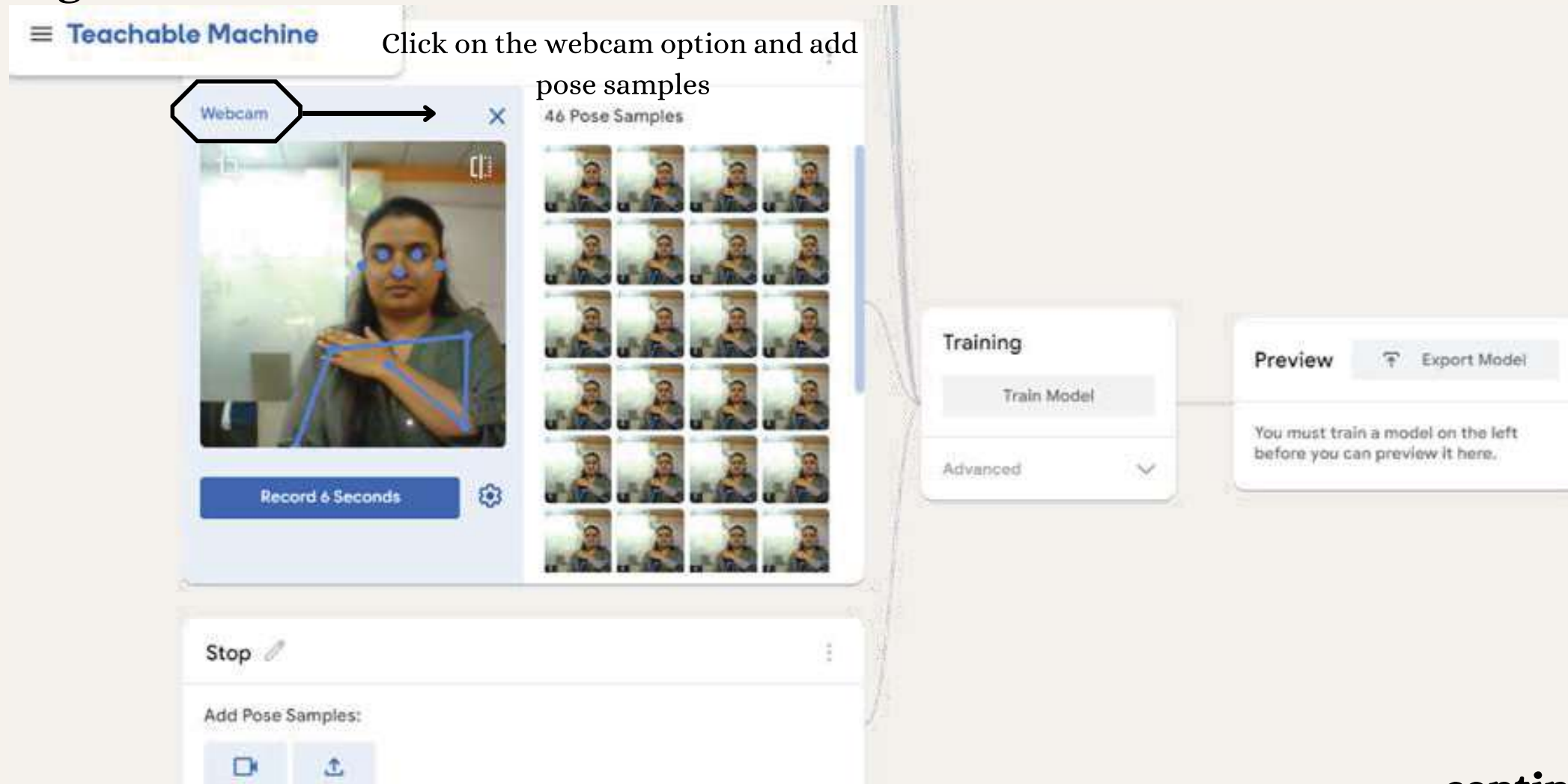
Preview

Export Model

You must train a model on the left before you can preview it here.

Stop

Add Pose Samples:

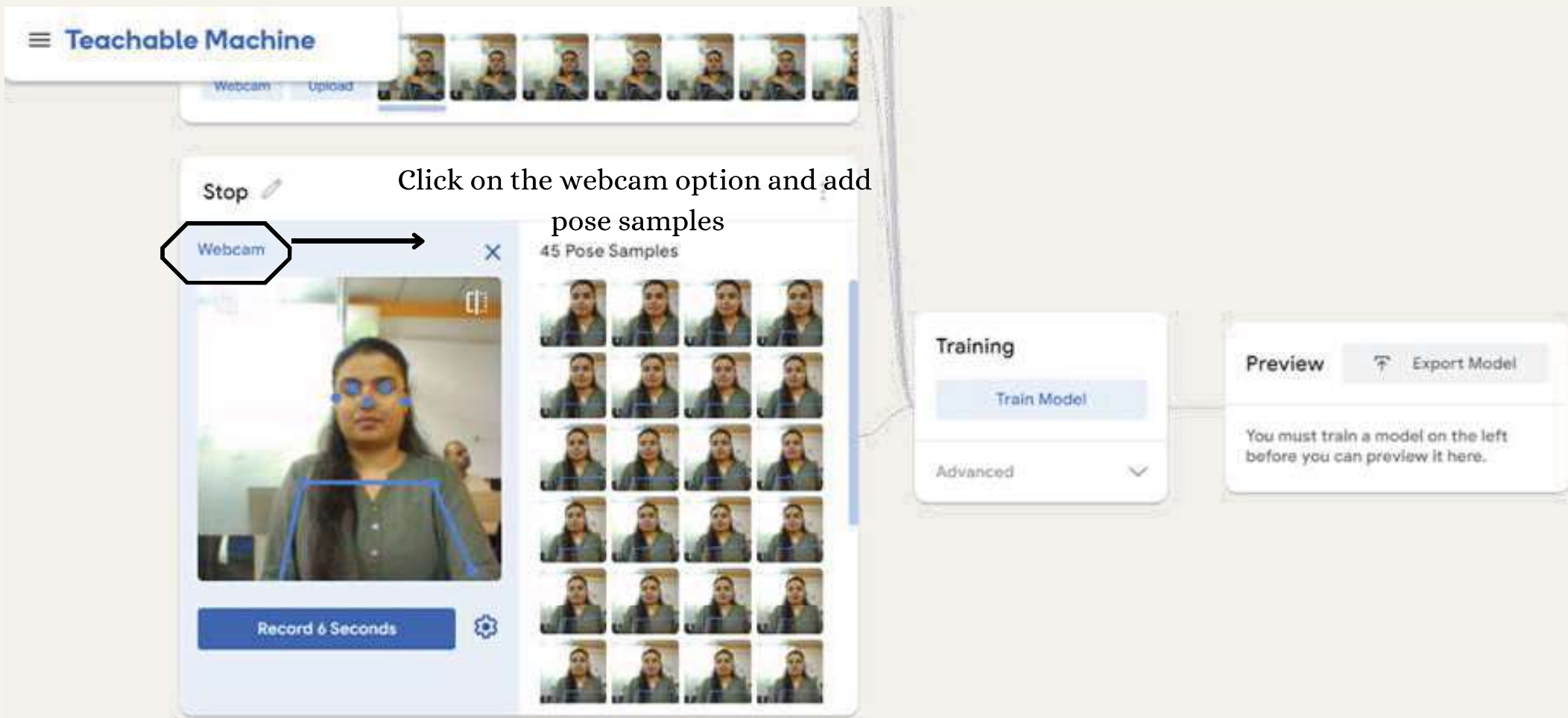


The image shows the Teachable Machine web interface. On the left, a large video window displays a person's face with blue tracking points and lines. Below it is a 'Record 6 Seconds' button. To the right of the video is a grid of 46 small thumbnail images, each showing the same person in the same pose. Above the grid, the text '46 Pose Samples' is visible. At the top left, the 'Webcam' option is highlighted with a black hexagon and an arrow pointing to it. Below the main interface, there are two panels: 'Training' and 'Preview'. The 'Training' panel has a 'Train Model' button and an 'Advanced' dropdown menu. The 'Preview' panel has an 'Export Model' button and a message: 'You must train a model on the left before you can preview it here.' At the bottom left, there is a 'Stop' button and a section for 'Add Pose Samples' with icons for uploading files and using a webcam.

continue to next....

## Step 3: - Add pose samples.

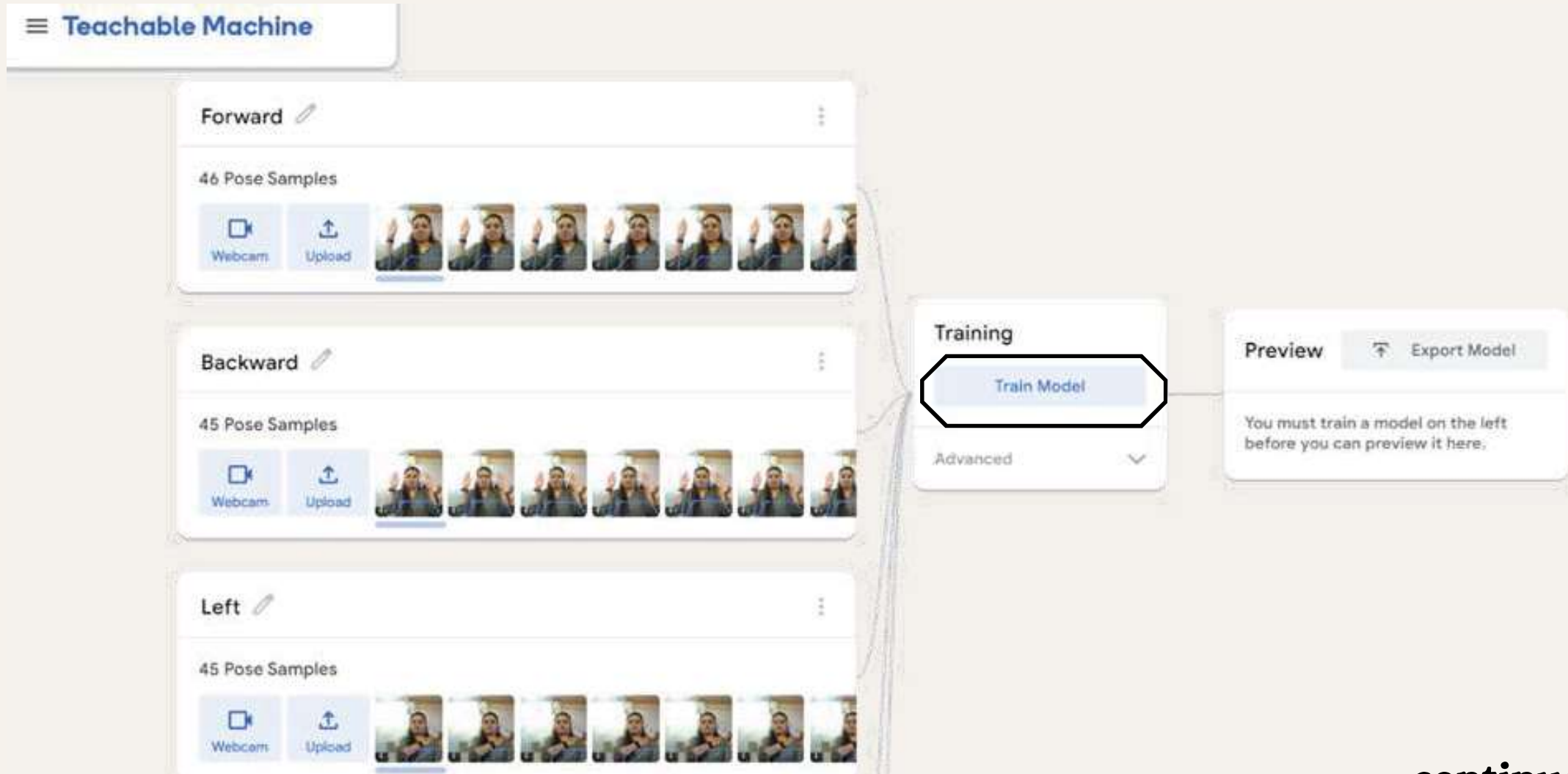
Stop



The screenshot displays the Teachable Machine web interface. At the top, there's a navigation bar with a hamburger menu and the text 'Teachable Machine'. Below this, there are two tabs: 'Webcam' and 'Upload'. The 'Webcam' tab is active, and a black arrow points to it with the text 'Click on the webcam option and add pose samples'. The main area is divided into two sections. On the left, there's a live video feed of a person's face with blue facial landmarks and a bounding box. Below the feed is a blue button labeled 'Record 6 Seconds' and a settings gear icon. On the right, there's a grid titled '45 Pose Samples' showing 45 small images of the same person in various poses. To the right of the main interface, there are two panels. The 'Training' panel has a 'Train Model' button and an 'Advanced' dropdown. The 'Preview' panel has an 'Export Model' button and a message: 'You must train a model on the left before you can preview it here.'

**continue to next....**

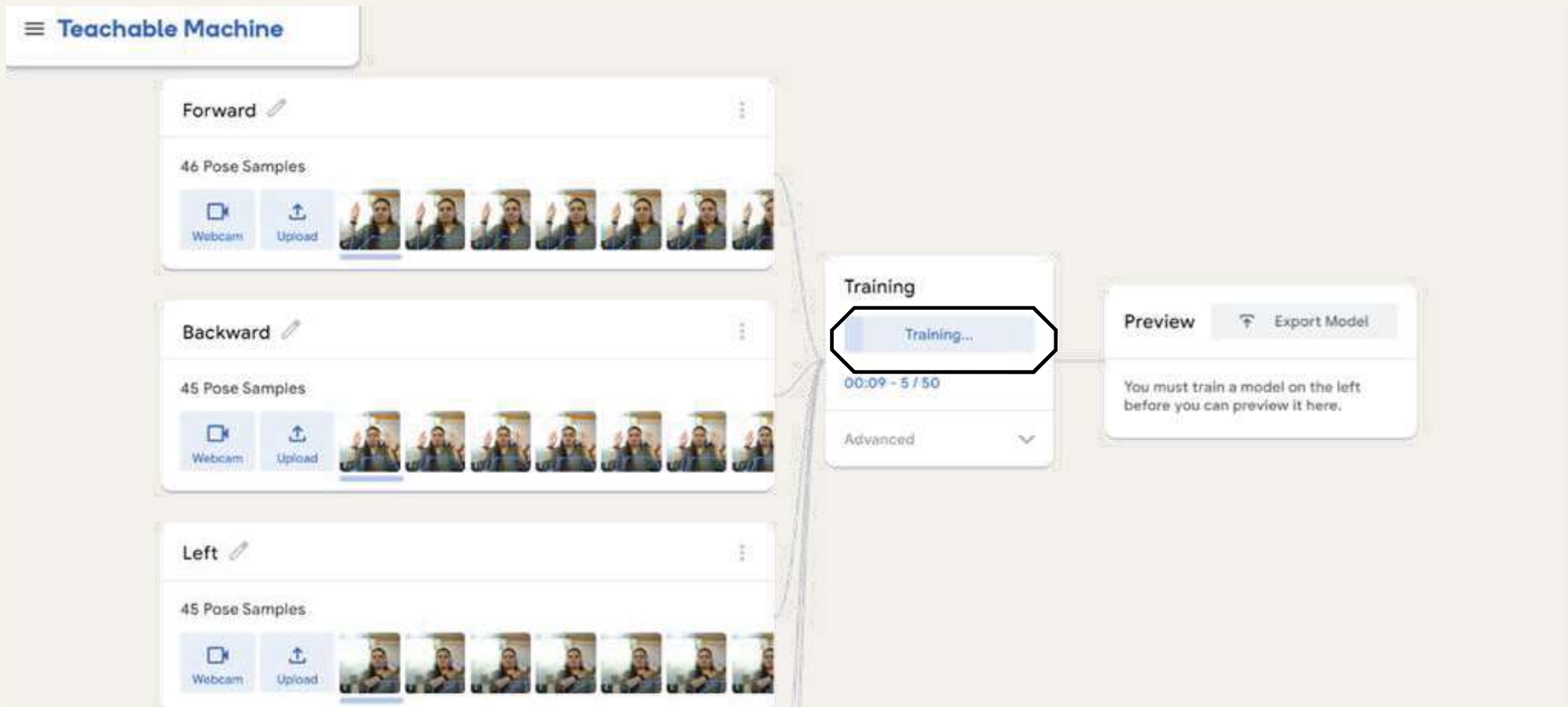
Step 4: - Click on the Train Model option.



The screenshot displays the Teachable Machine web interface. On the left, there are three panels for training: 'Forward' (46 Pose Samples), 'Backward' (45 Pose Samples), and 'Left' (45 Pose Samples). Each panel includes 'Webcam' and 'Upload' buttons and a sequence of pose sample images. A blue arrow points from the 'Forward' panel to the 'Training' panel. The 'Training' panel is in the center, featuring a 'Train Model' button highlighted with a black octagonal border. Below it is an 'Advanced' dropdown menu. To the right of the 'Training' panel is the 'Preview' panel, which contains an 'Export Model' button and a message: 'You must train a model on the left before you can preview it here.'

**continue to next....**

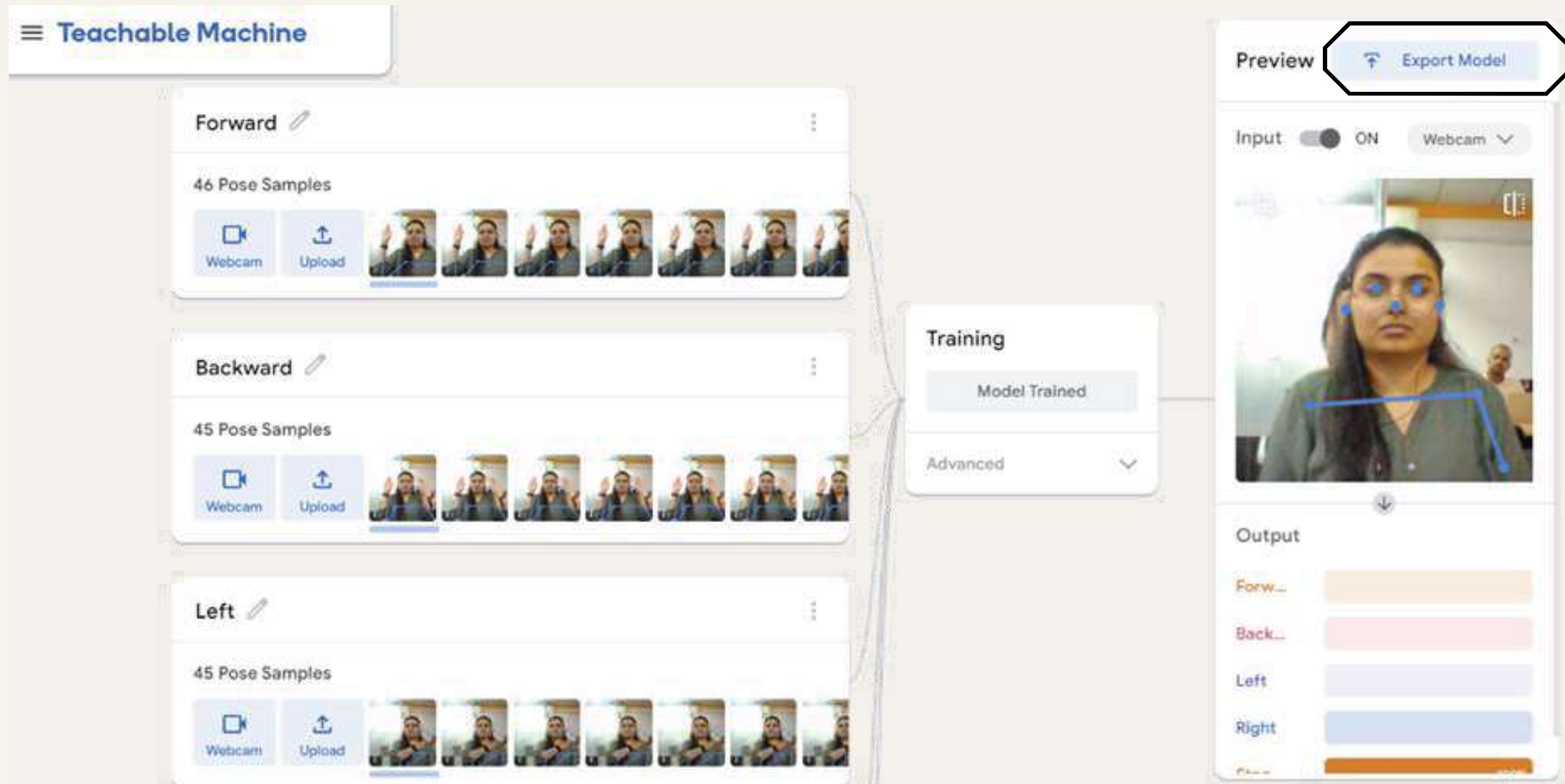
## Step 5: - Model is start training



The screenshot displays the Teachable Machine web interface. On the left, there are three panels for training: 'Forward' (46 Pose Samples), 'Backward' (45 Pose Samples), and 'Left' (45 Pose Samples). Each panel includes 'Webcam' and 'Upload' buttons and a sequence of pose sample images. A bracket on the right side of these panels points to the 'Training' panel in the center. The 'Training' panel shows a 'Training...' button, a progress indicator '00:09 - 5 / 50', and an 'Advanced' dropdown menu. To the right of the 'Training' panel is the 'Preview' panel, which contains an 'Export Model' button and a message: 'You must train a model on the left before you can preview it here.'

**continue to next....**

## Step 6: - Click on Export model

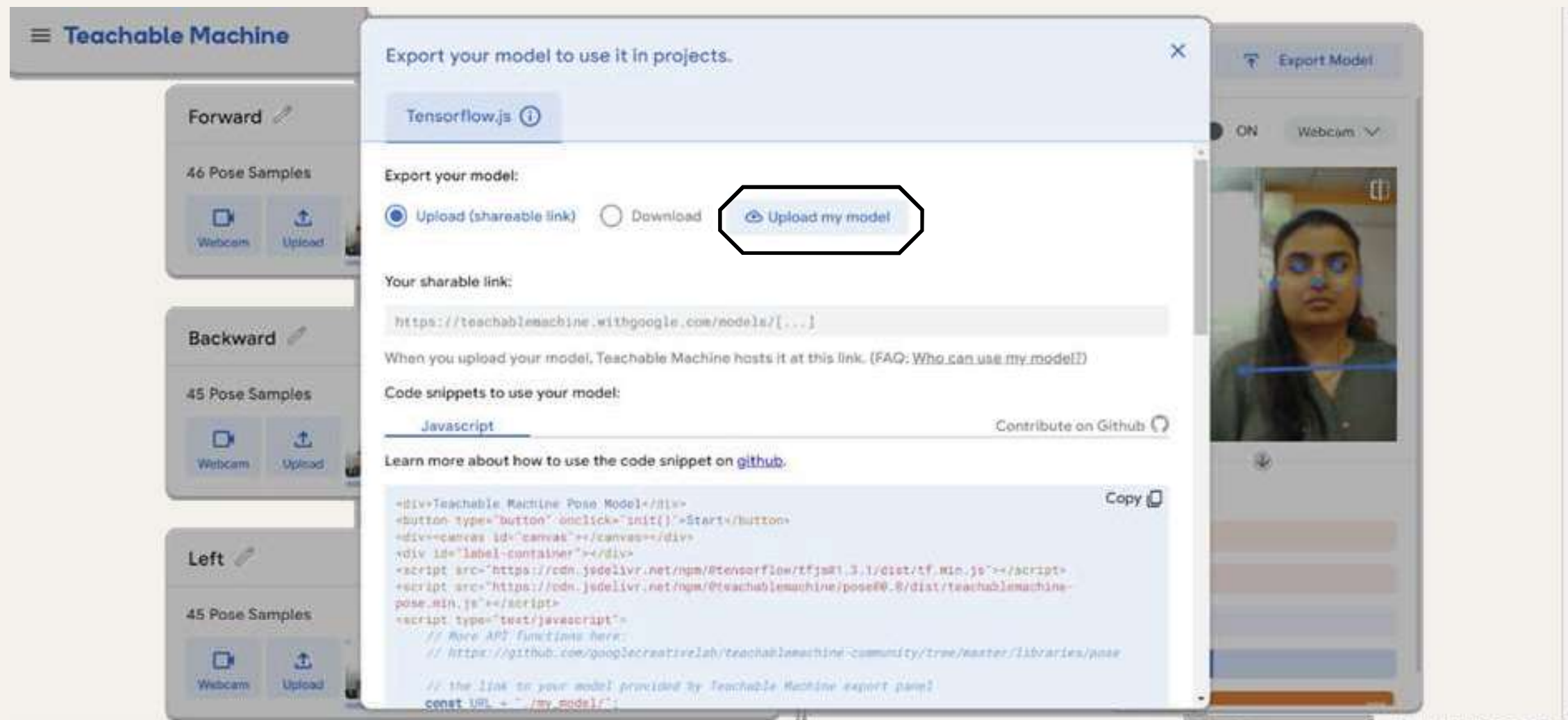


The screenshot displays the Teachable Machine web interface. On the left, there are three pose sample sections: 'Forward' (46 Pose Samples), 'Backward' (45 Pose Samples), and 'Left' (45 Pose Samples). Each section includes a 'Webcam' button and an 'Upload' button, followed by a row of pose sample images. In the center, a 'Training' panel shows 'Model Trained' and an 'Advanced' dropdown. On the right, the 'Preview' panel shows a live video feed of a person with facial tracking points. The 'Export Model' button in the top right of the Preview panel is highlighted with a black octagonal border. Below the Preview panel, an 'Output' section shows color-coded bars for 'Forw...', 'Back...', 'Left', and 'Right'.

continue to next....



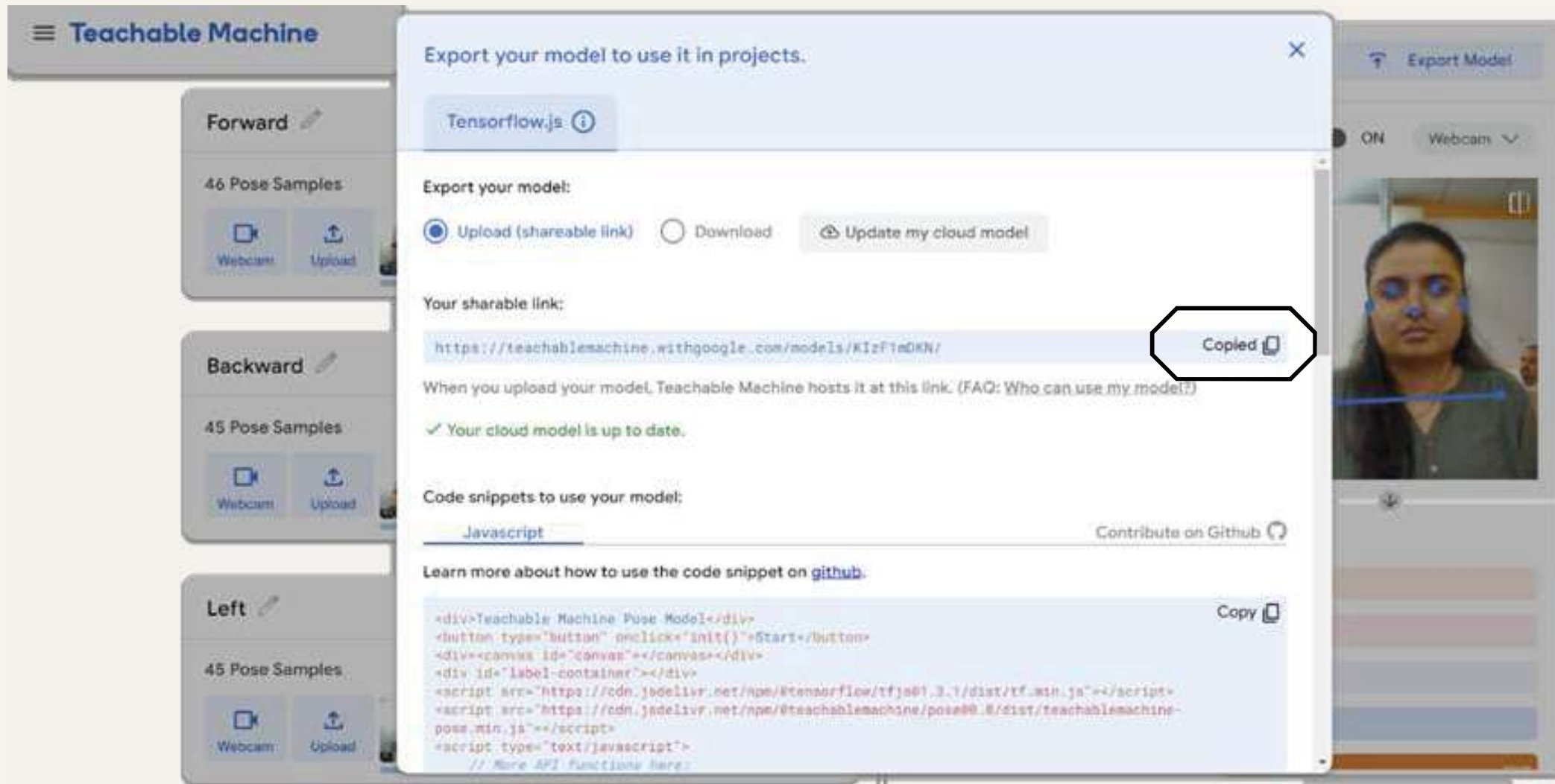
## Step 7: - click on upload my channel



continue to next....



## Step 8: - copy the link.



**Teachable Machine**

Export your model to use it in projects. X

Tensorflow.js ⓘ

Export your model:

☒ Upload (shareable link) ☐ Download

Your sharable link:

<https://teachablemachine.withgoogle.com/models/KIzF1mDKN/> Copied

When you upload your model, Teachable Machine hosts it at this link. (FAQ: Who can use my model?)

✓ Your cloud model is up to date.

Code snippets to use your model:

Javascript [Contribute on Github](#)

Learn more about how to use the code snippet on [github](#).

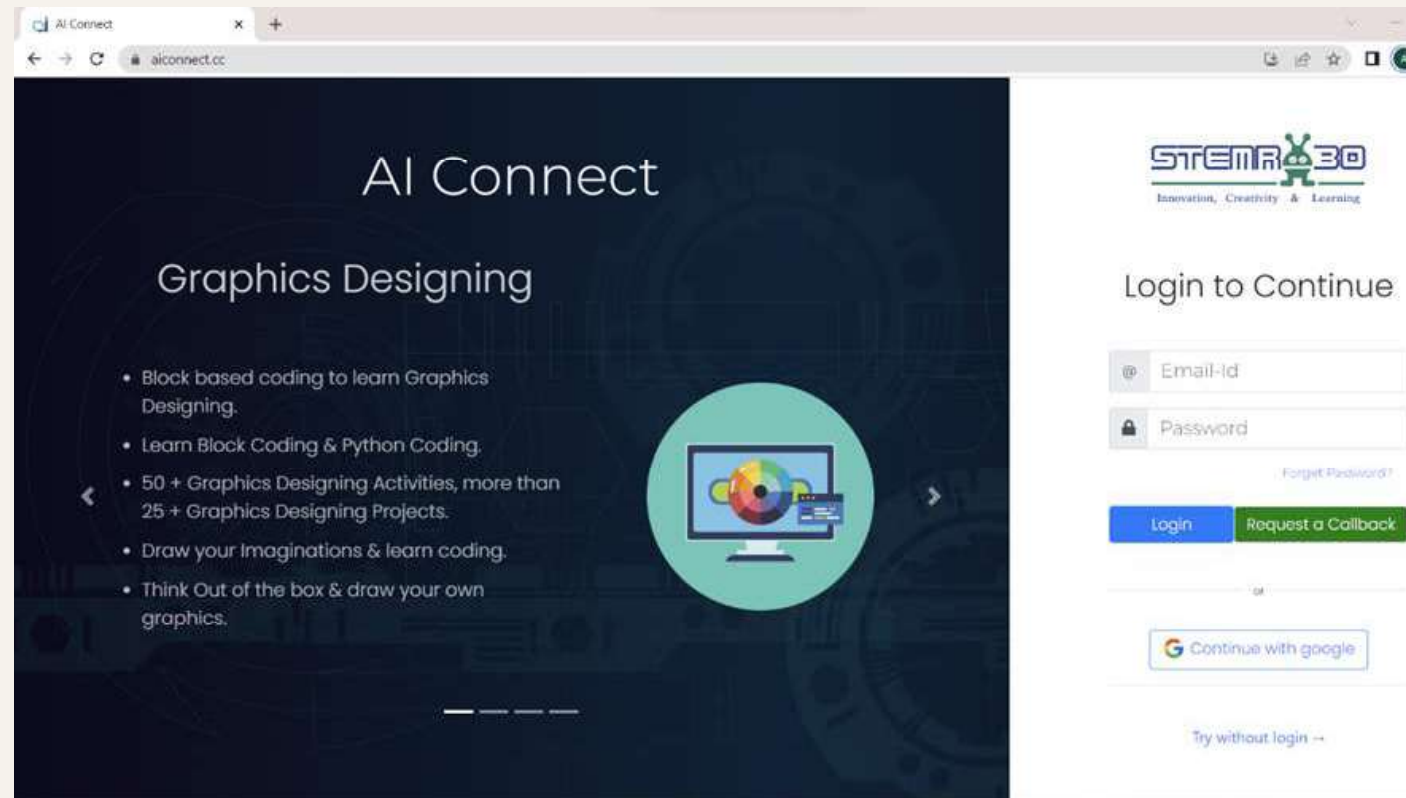
```

<div>Teachable Machine Pose Model</div>
<button type="button" onclick="init()">Start</button>
<div id="canvas"></div>
<div id="label-container"></div>
<script src="https://cdn.jsdelivr.net/npm/@tensorflow/tfjs@1.3.1/dist/tf.min.js"></script>
<script src="https://cdn.jsdelivr.net/npm/@teachablemachine/pose@0.8/dist/teachablemachine-pose.min.js"></script>
<script type="text/javascript">
  // More API Functions here:
  
```

Copy

# Source Code

Step – 1 Go to <https://aiconnect.cc/login>.



**continue to next....**

Step-2 Log-in through your aiconnect mail id & password/ continue with google.



The image shows a two-part interface. The left part is a dark blue landing page for 'AI Connect Graphics Designing'. It features a list of bullet points: 'Block based coding to learn Graphics Designing.', 'Learn Block Coding & Python Coding.', '50 + Graphics Designing Activities, more than 25 + Graphics Designing Projects.', 'Draw your Imaginations & learn coding.', and 'Think Out of the box & draw your own graphics.' Below the text is a circular icon of a computer monitor displaying a colorful design. The right part is a white login form titled 'Login to Continue'. It includes the STEMROBO logo at the top. The form has two input fields: 'Mail-Id' and 'Password'. A black callout bubble points to the 'Mail-Id' field with the text 'Enter your aiconnect - id & password'. Below the password field is a 'Forgot Password?' link. There are two buttons: a blue 'Login' button and a green 'Request a Callback' button. Below these is a horizontal line with the word 'or' in the center. Underneath is a 'Continue with google' button with the Google logo. At the bottom of the form is a link that says 'Try without login →'.

AI Connect

Graphics Designing

- Block based coding to learn Graphics Designing.
- Learn Block Coding & Python Coding.
- 50 + Graphics Designing Activities, more than 25 + Graphics Designing Projects.
- Draw your Imaginations & learn coding.
- Think Out of the box & draw your own graphics.

Enter your aiconnect - id & password

STEMROBO<sup>TM</sup>  
Innovation, Creativity & Learning

Login to Continue

Mail-Id

Password

[Forgot Password?](#)

Login Request a Callback

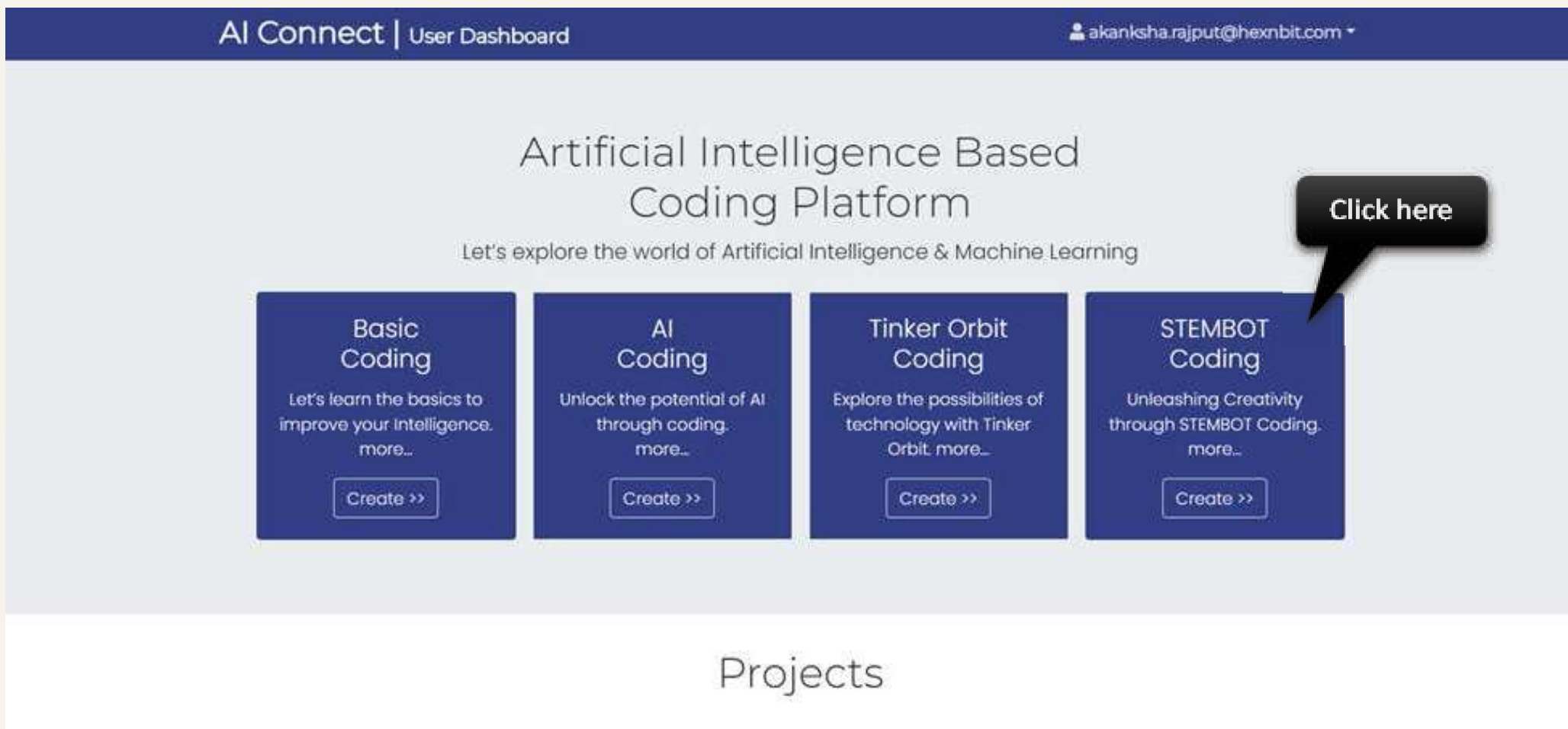
or

 Continue with google

[Try without login →](#)

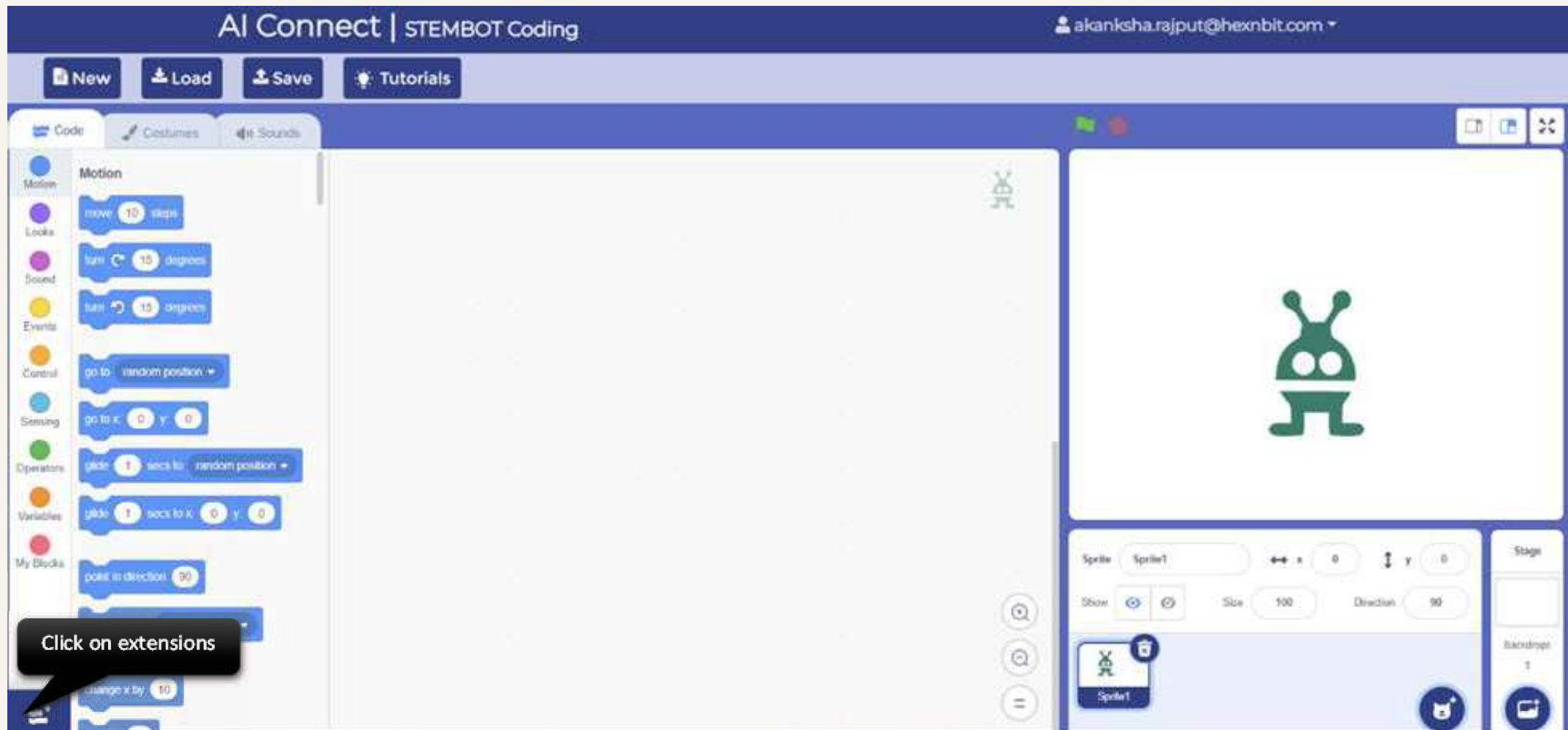
continue to next....

Step – 3 Click on STEMBOT Coding to create a project/ click on create.



**continue to next....**

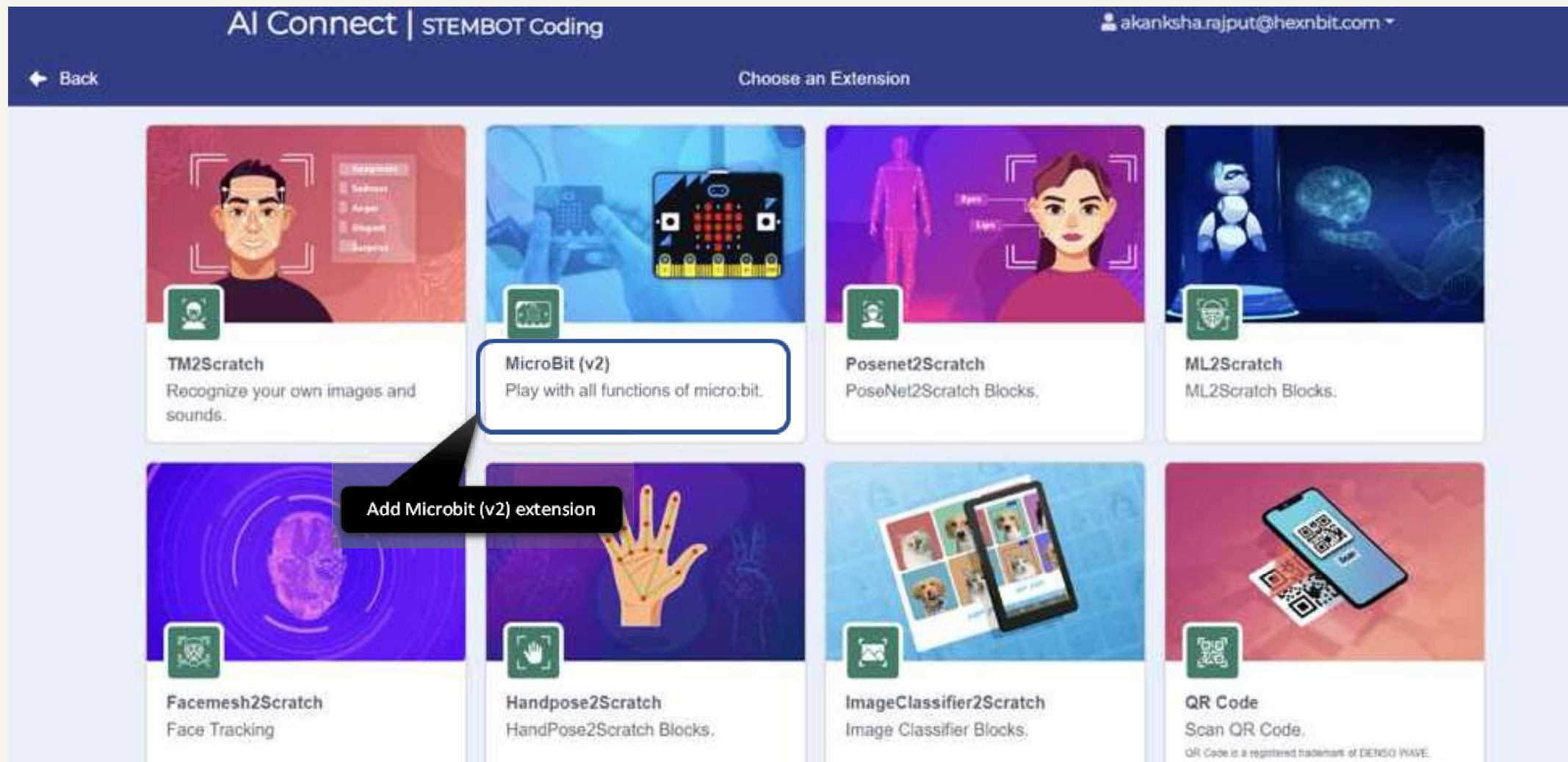
Step-4 Click on extensions.



continue to next....



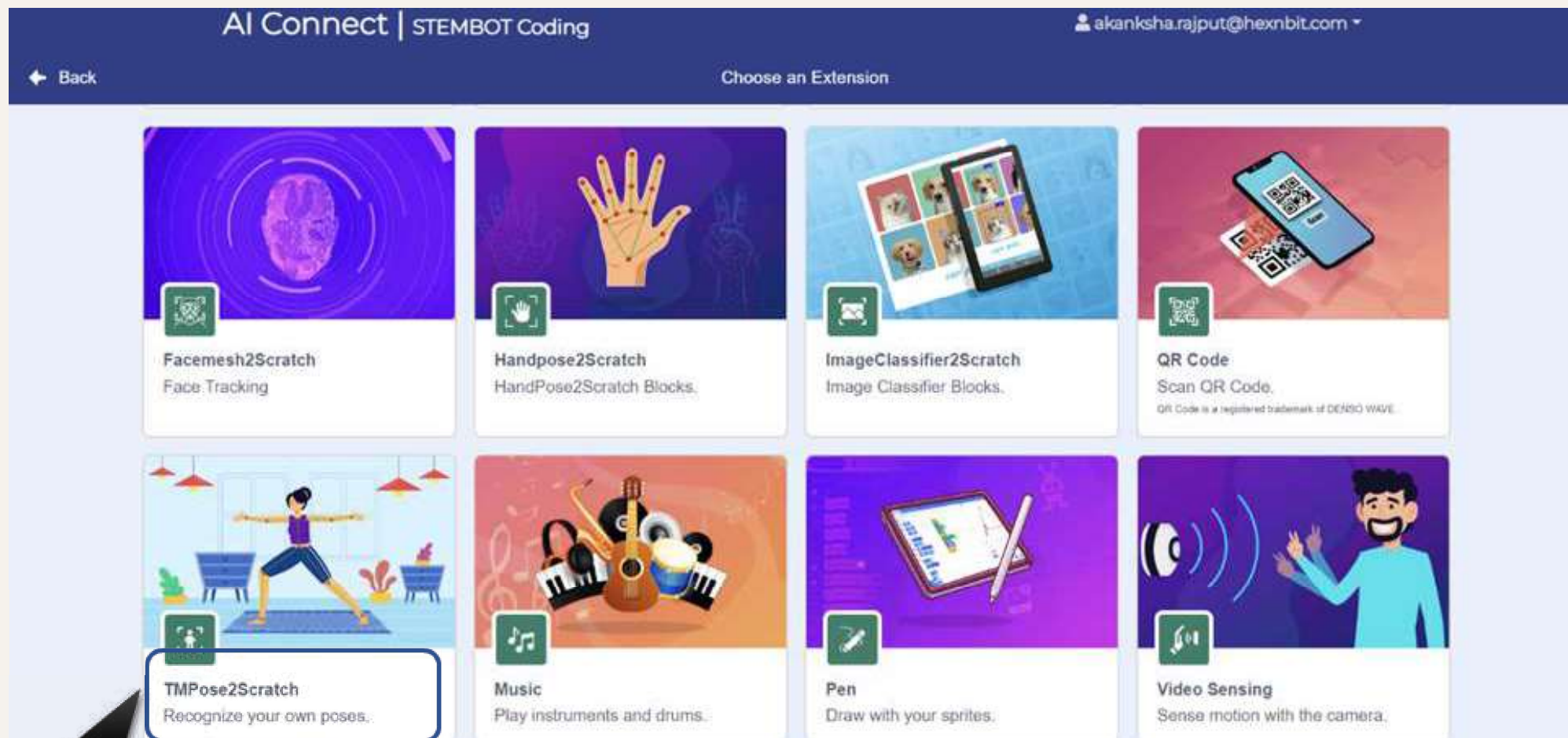
## Step-5 Add Micro: bit V2 and Google teachable (Pose) extensions.



continue to next....



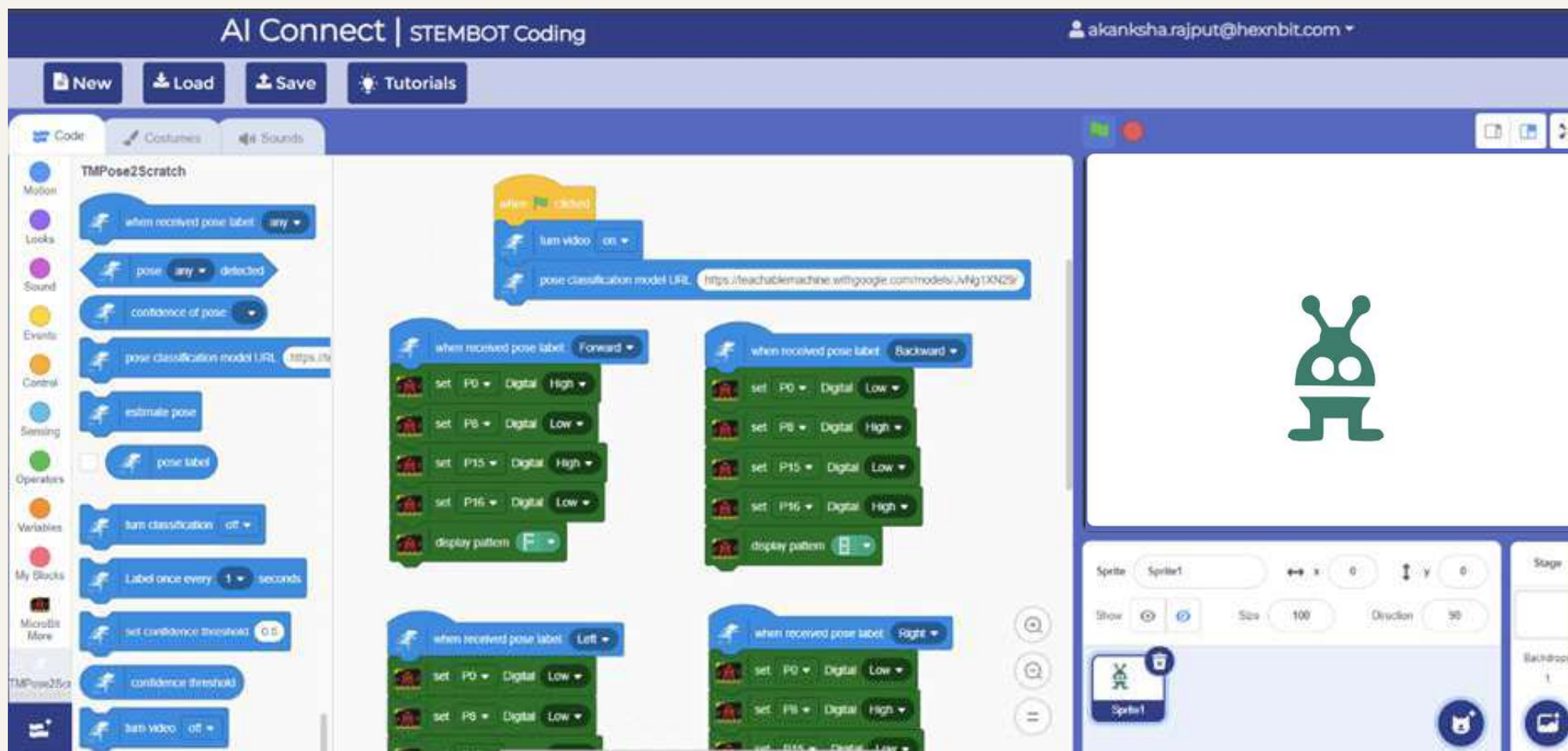
## Step-5 Add Micro: bit V2 and Google teachable (Pose) extensions.



Add TMpose extension

continue to next....

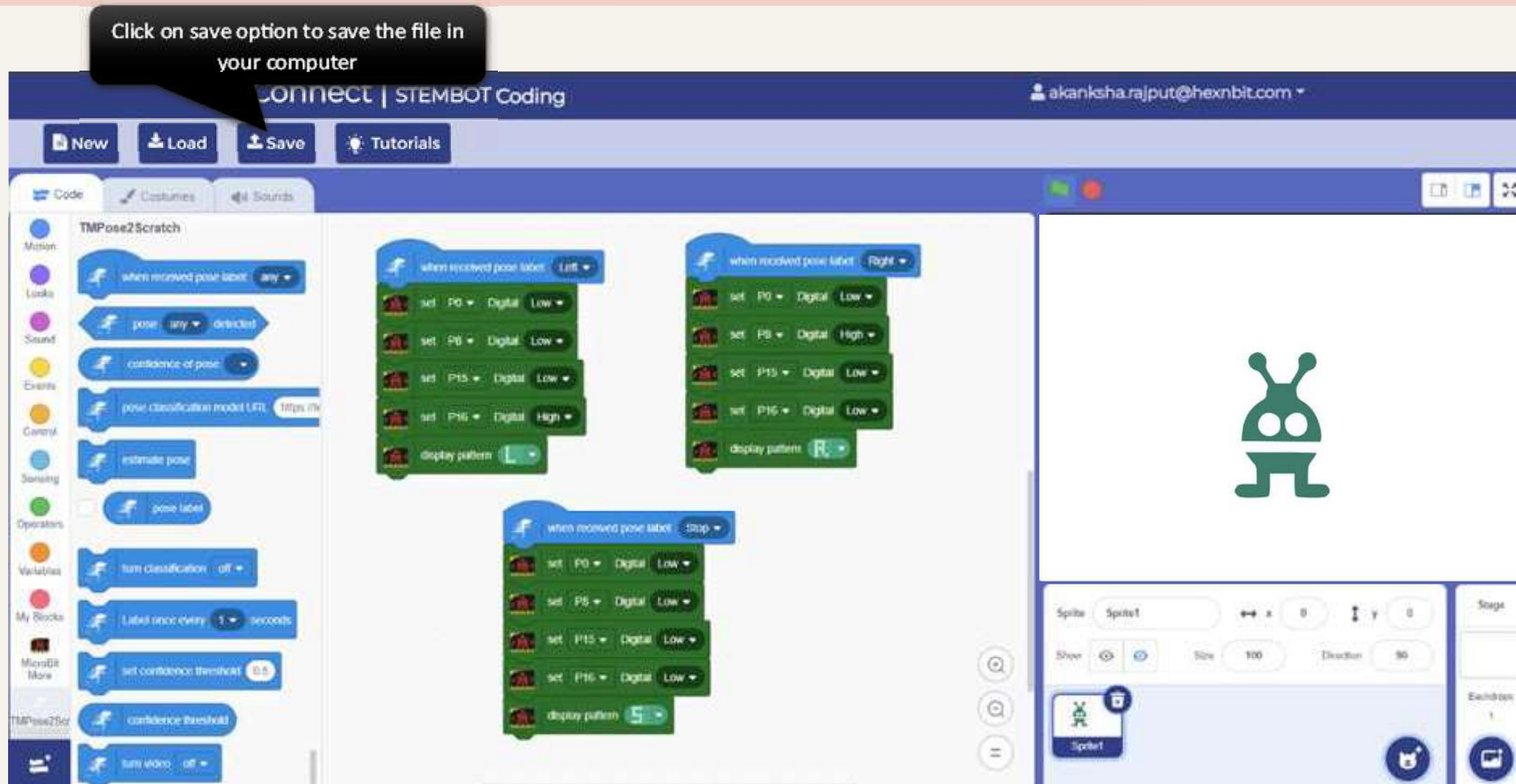
Step- 6 Write the following code on the workspace by dragging the blocks.



continue to next....

Step- 6 Write the following code on the workspace by dragging the blocks.

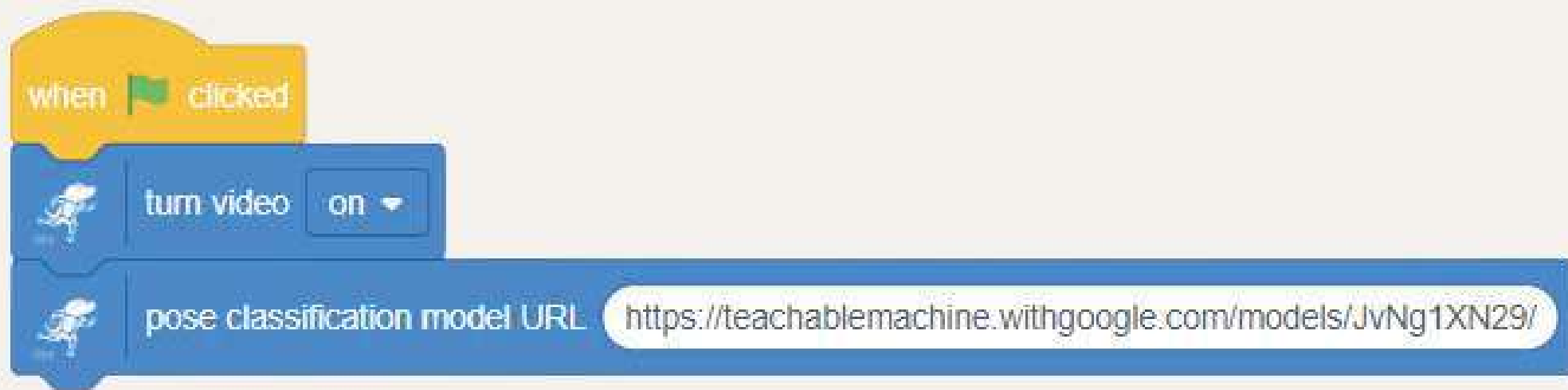
Click on save option to save the file in your computer



The screenshot shows the STEMROBO Coding interface. The top bar includes 'CONNECT | STEMBOT Coding' and a user profile 'akanksha.rajput@hexnbit.com'. Below the bar are buttons for 'New', 'Load', 'Save', and 'Tutorials'. The left sidebar shows a 'Code' tab with a 'TMPose2Scratch' project. The main workspace displays three code blocks for 'when received pose label' events. The first block is for 'Left' and sets digital pins P0, P8, P15, and P16 to Low and High, then displays pattern 'L'. The second block is for 'Right' and sets digital pins P0, P8, P15, and P16 to Low and High, then displays pattern 'R'. The third block is for 'Stop' and sets digital pins P0, P8, P15, and P16 to Low, then displays pattern 'S'. The stage shows a green alien sprite.

continue to next....

Step- 6 Write the following code on the workspace by dragging the blocks.



**continue to next. . . .**

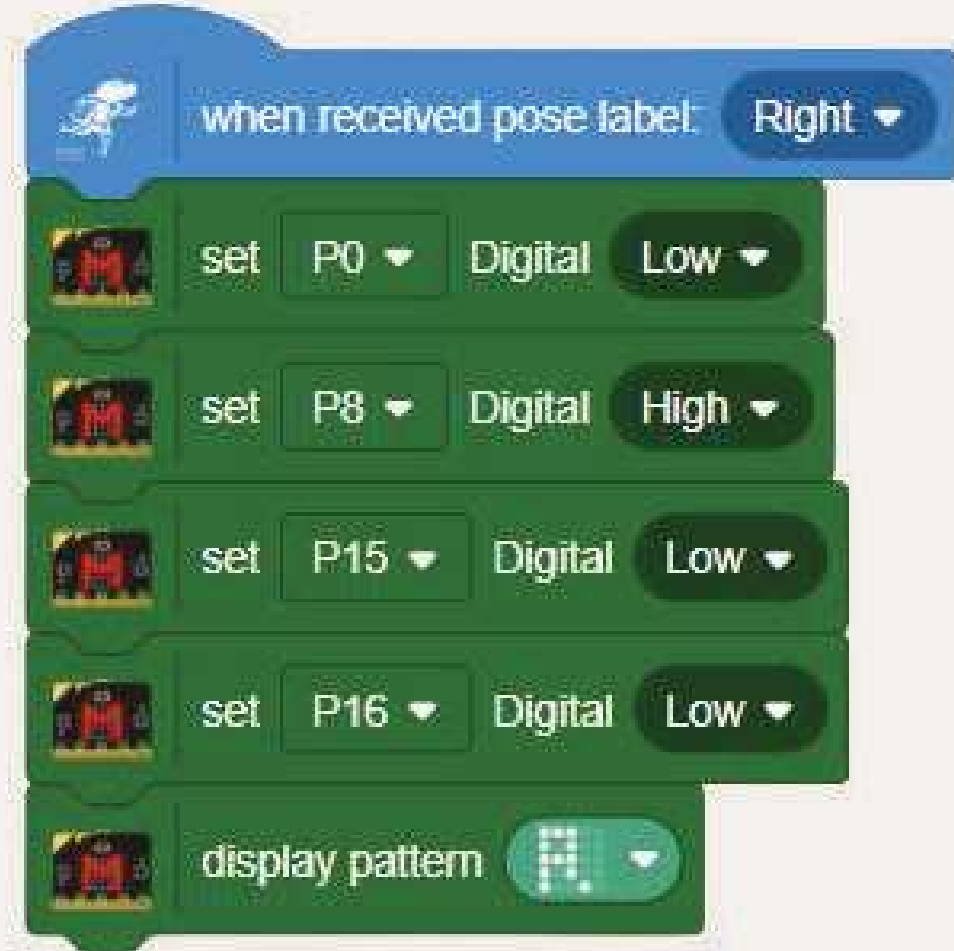
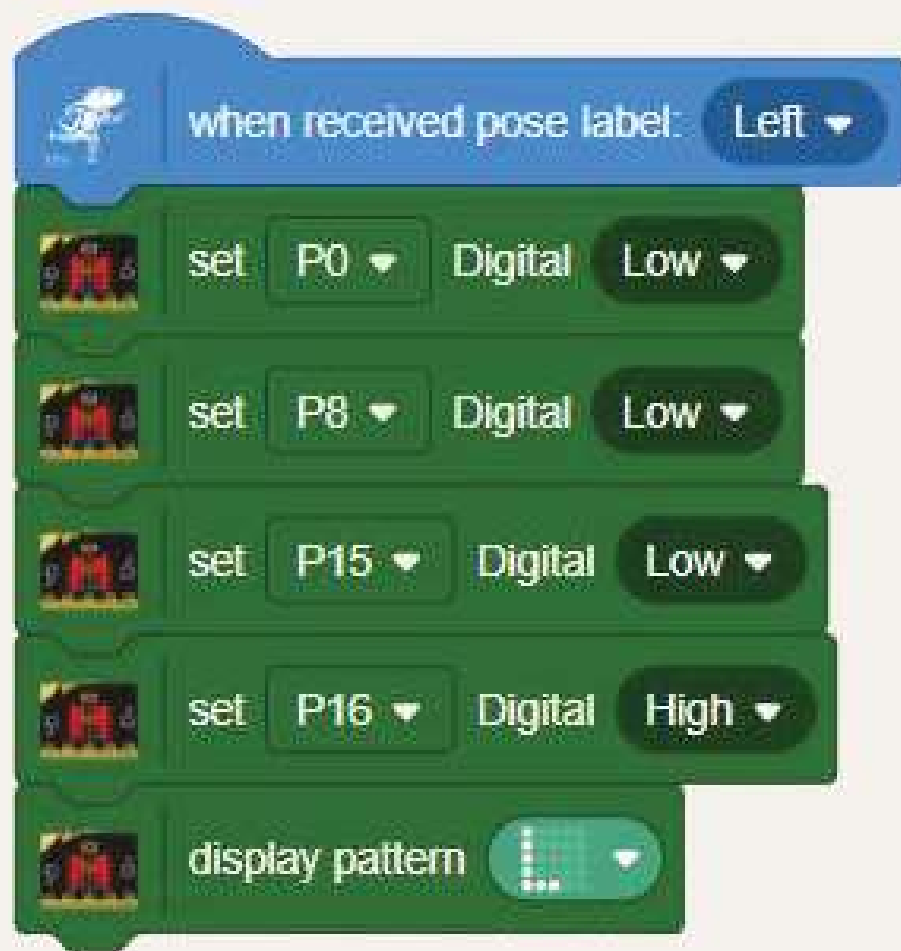


Step- 6 Write the following code on the workspace by dragging the blocks.



continue to next....

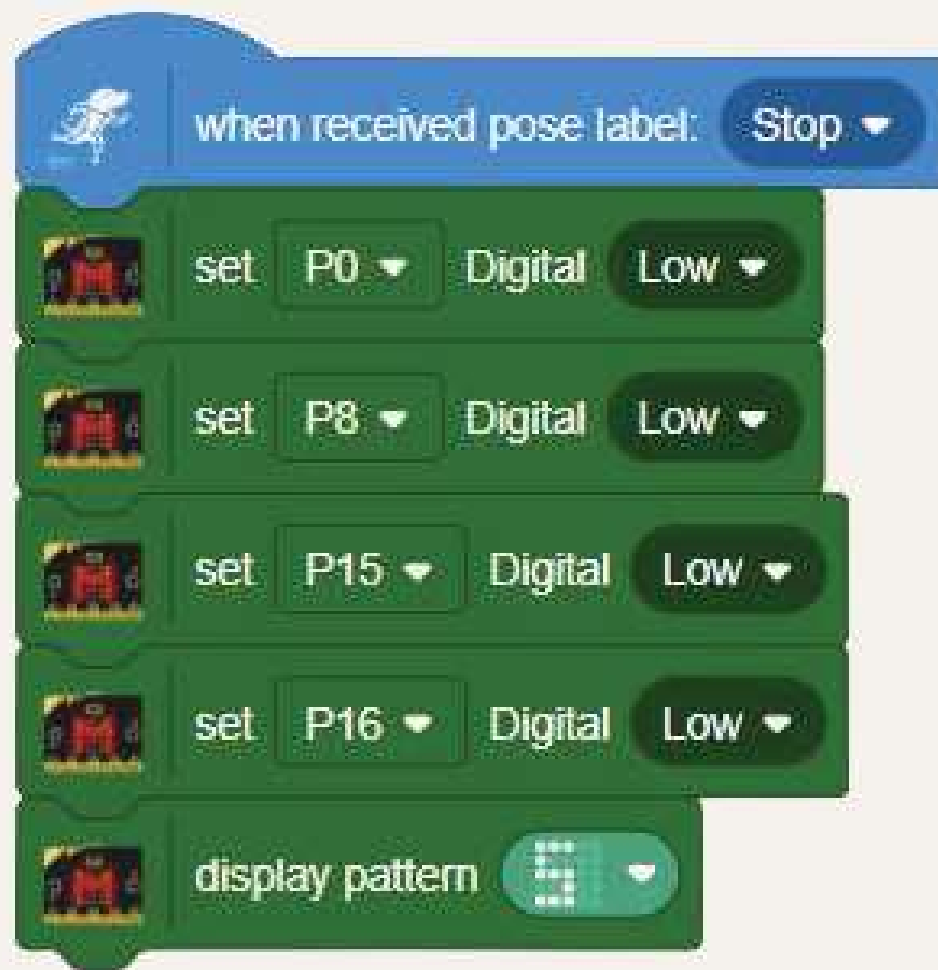
Step- 6 Write the following code on the workspace by dragging the blocks.



continue to next....

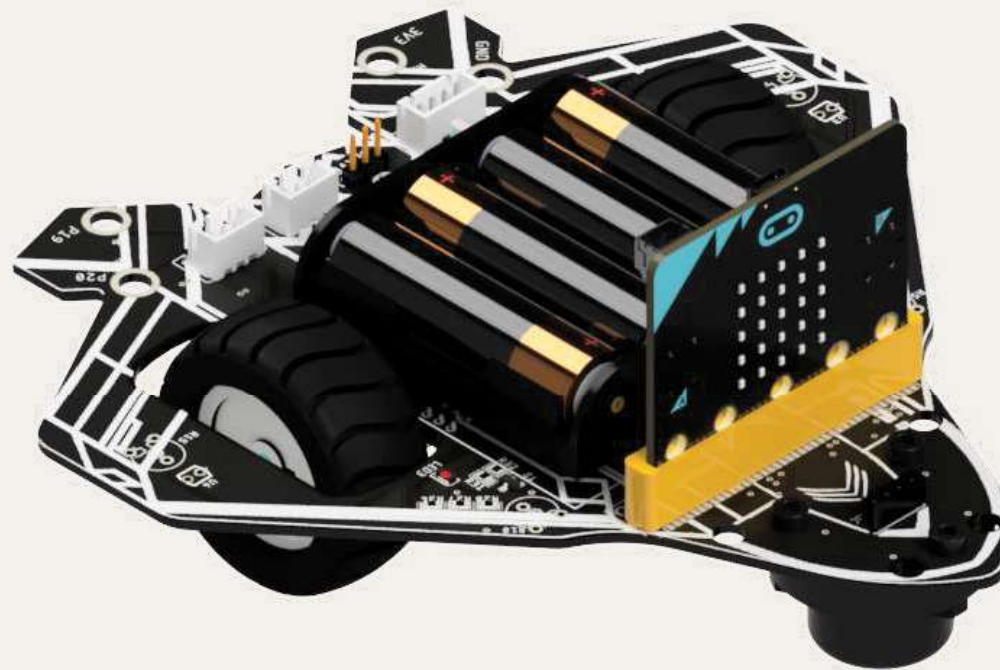


Step- 6 Write the following code on the workspace by dragging the blocks.



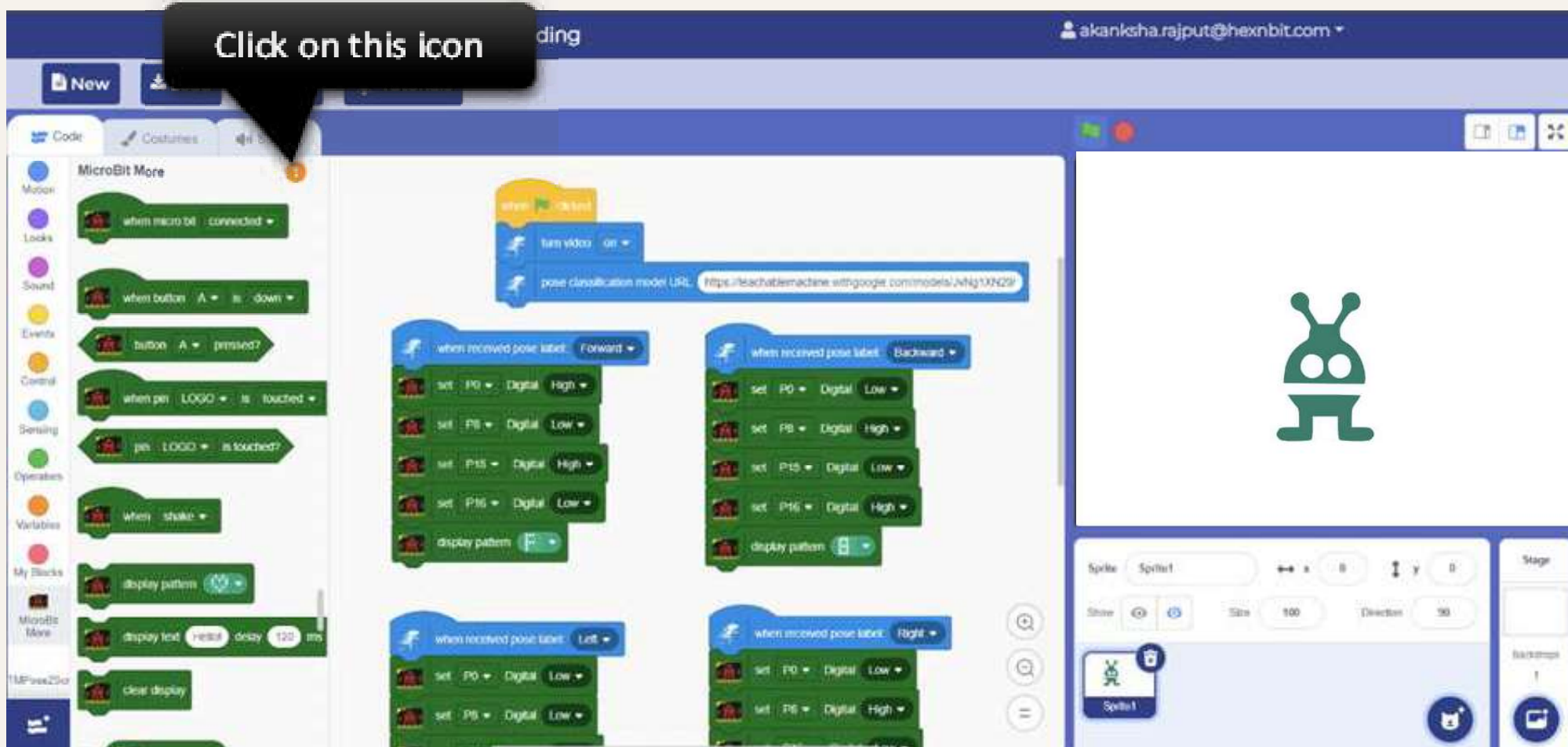
**continue to next....**

Step- 7 Connect the micro: bit with STEMBOT. And power up the robot by pressing the power button.



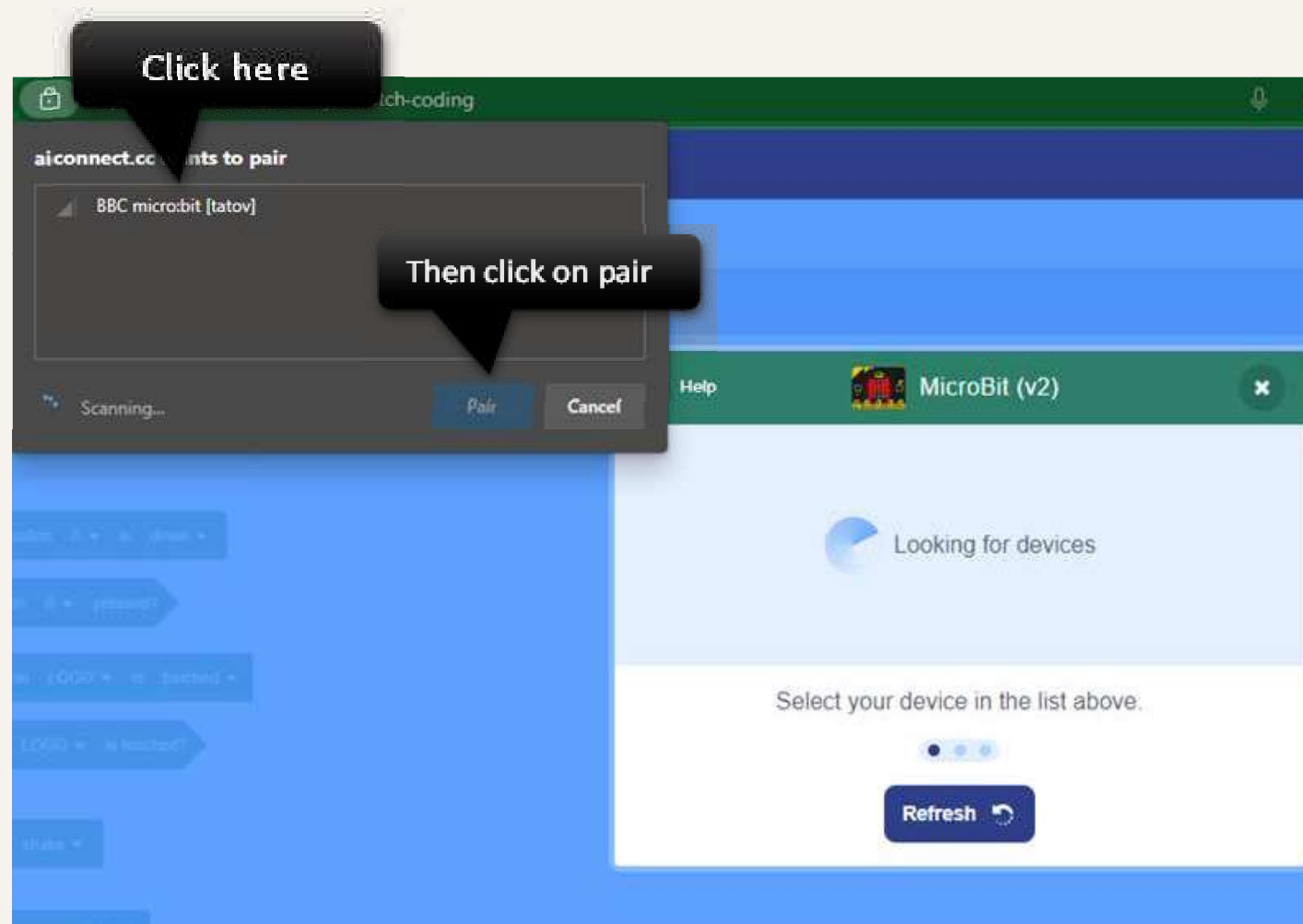
**continue to next....**

Step- 8 Now connect your micro: bit with aiconnect platform.



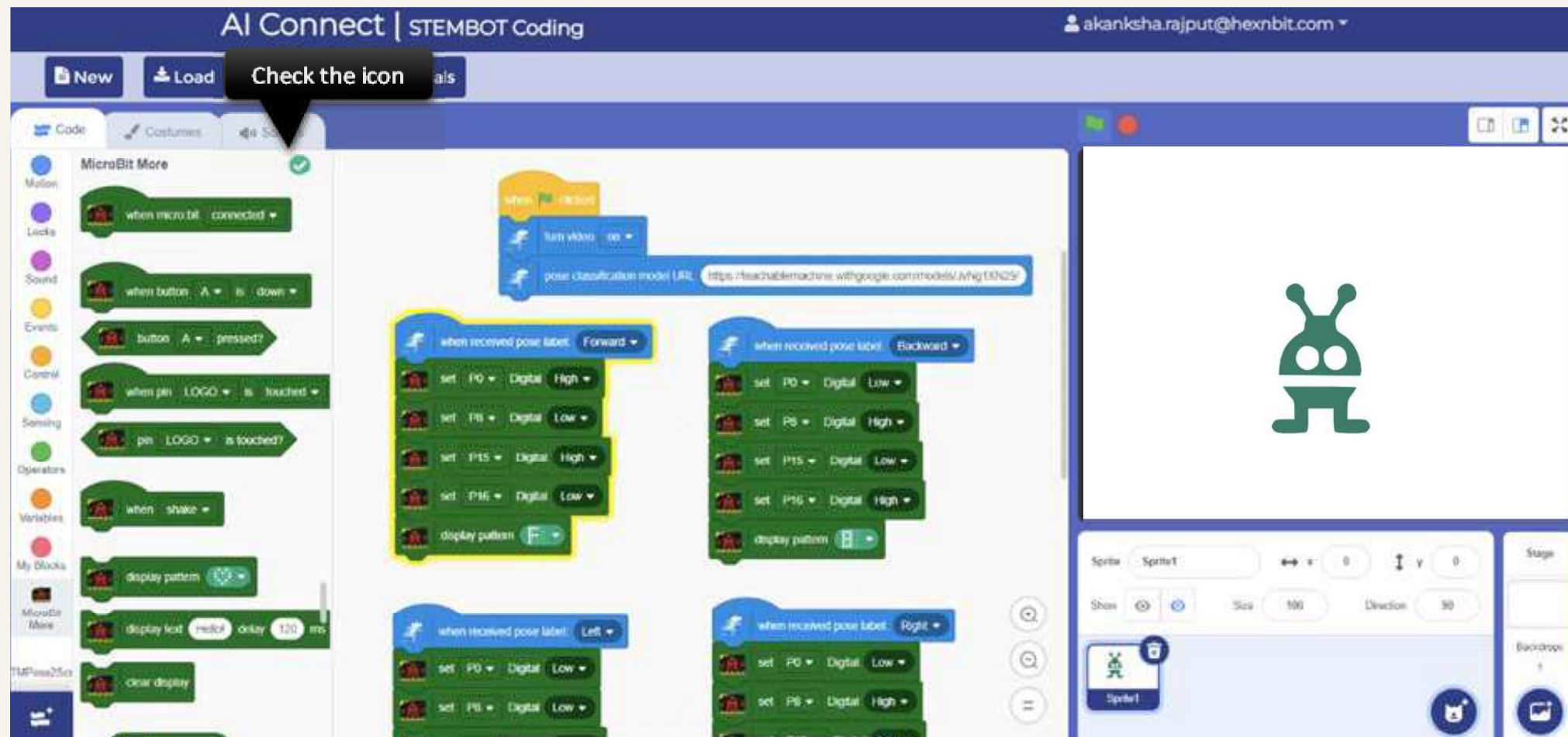
continue to next....

Step- 9 A pop-up window will come where you can see your micro: bit name. Click on the name then click on the pair option.



**continue to next....**

Step- 10 Now you can see a green tick icon that means micro: bit is connected with the aiconnect platform via Bluetooth.



**Thank you** 



