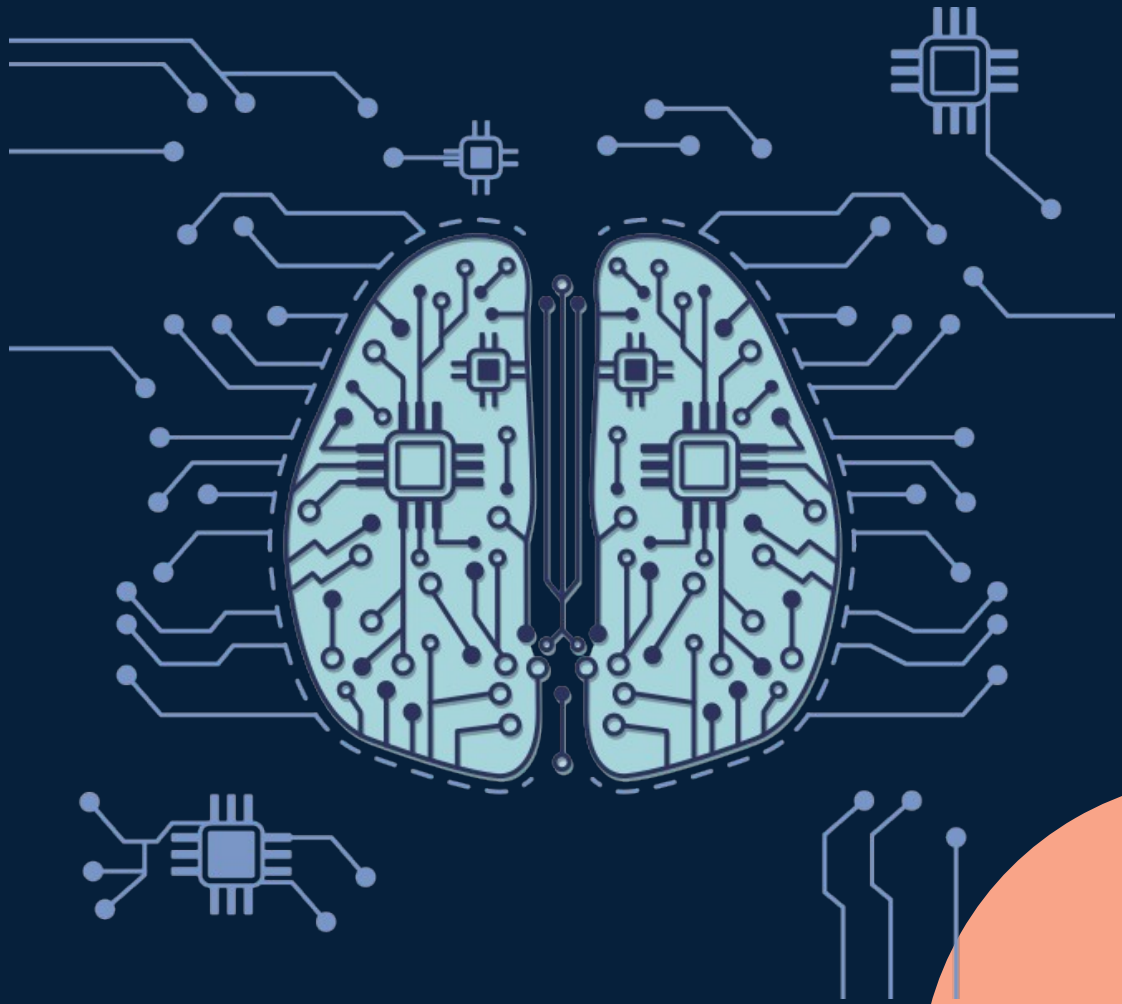
Pose Models



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Pose Model

- Trains the machine to classify different types of Pose
- Process:
  1) Provide samples of the pose
  2) Tell the machine what each pose means
  3) Teachable machine will train the model
  4) Use the model file in your program

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How it works?

- A little different from the rest...
- Two stage process

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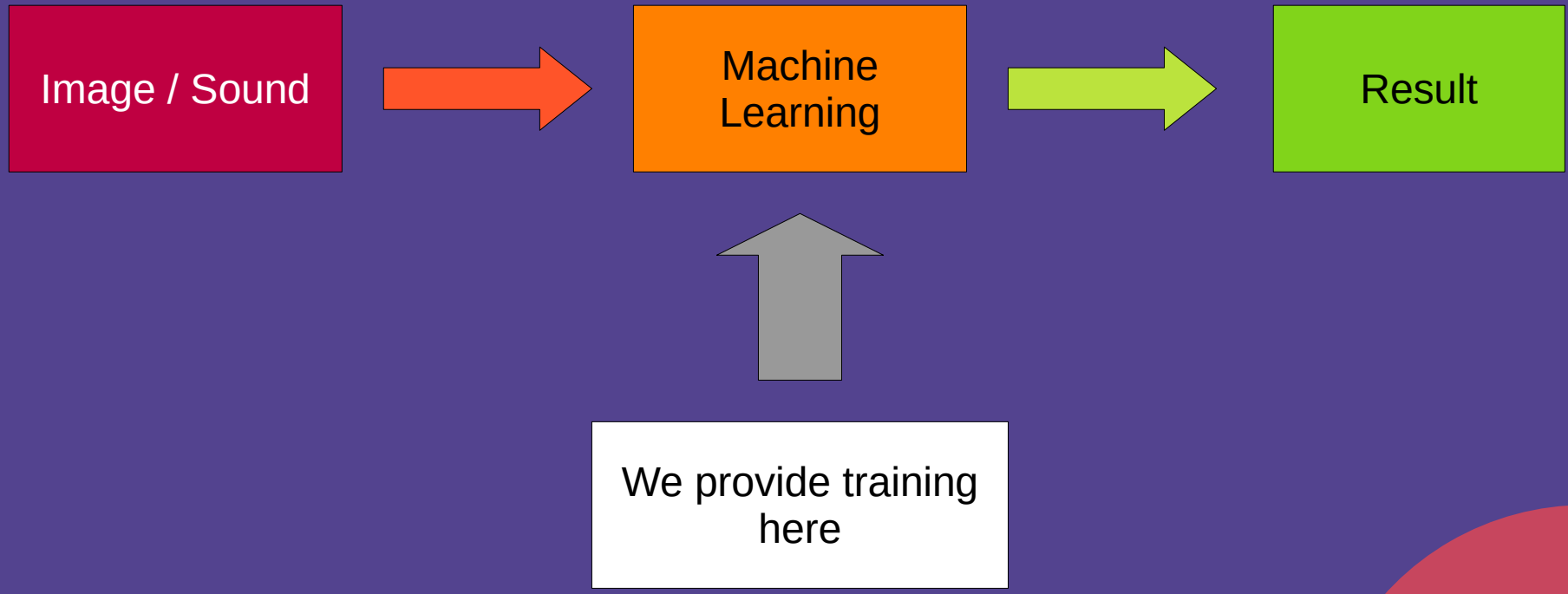
Image and Audio



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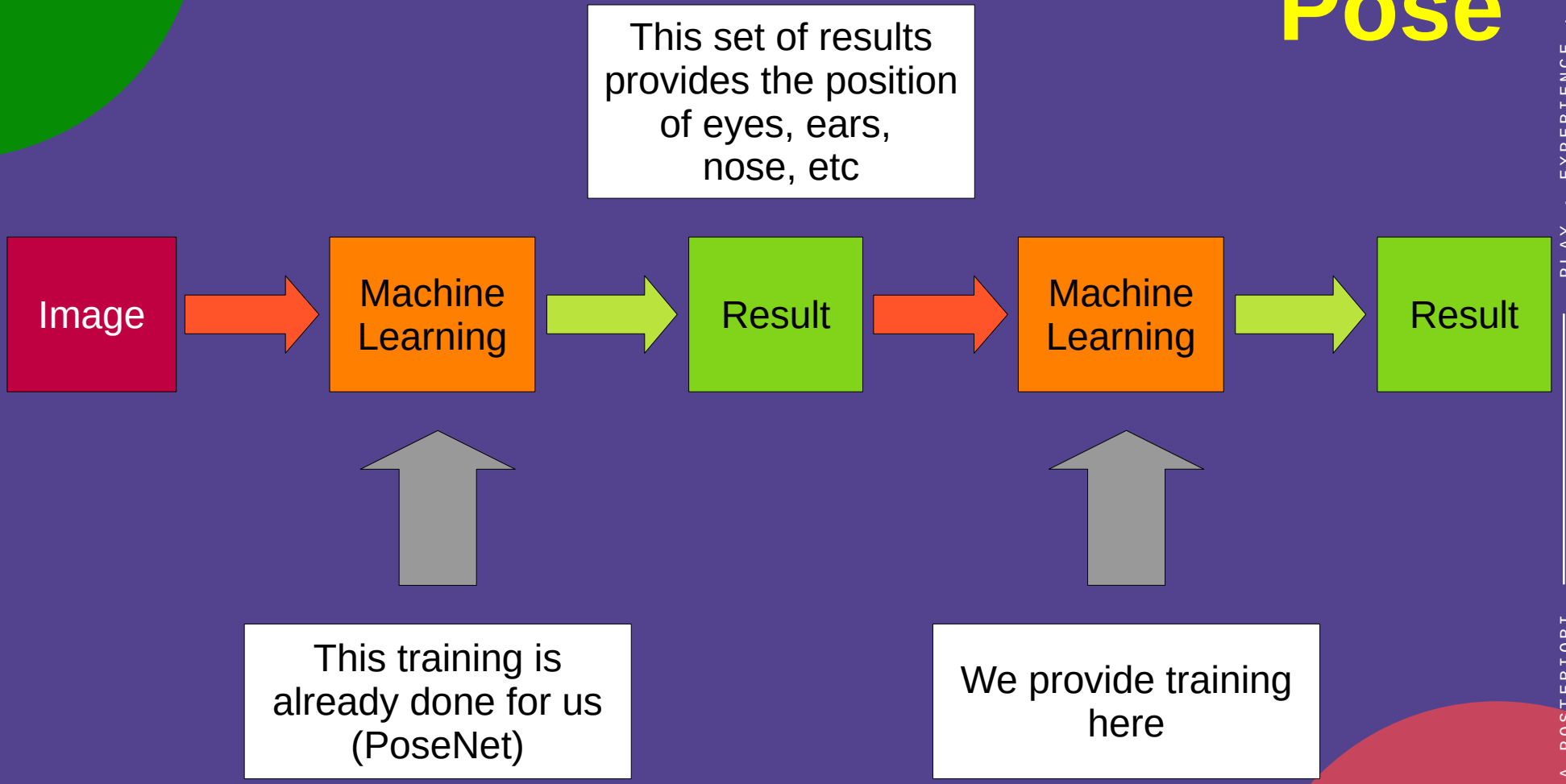
Pose



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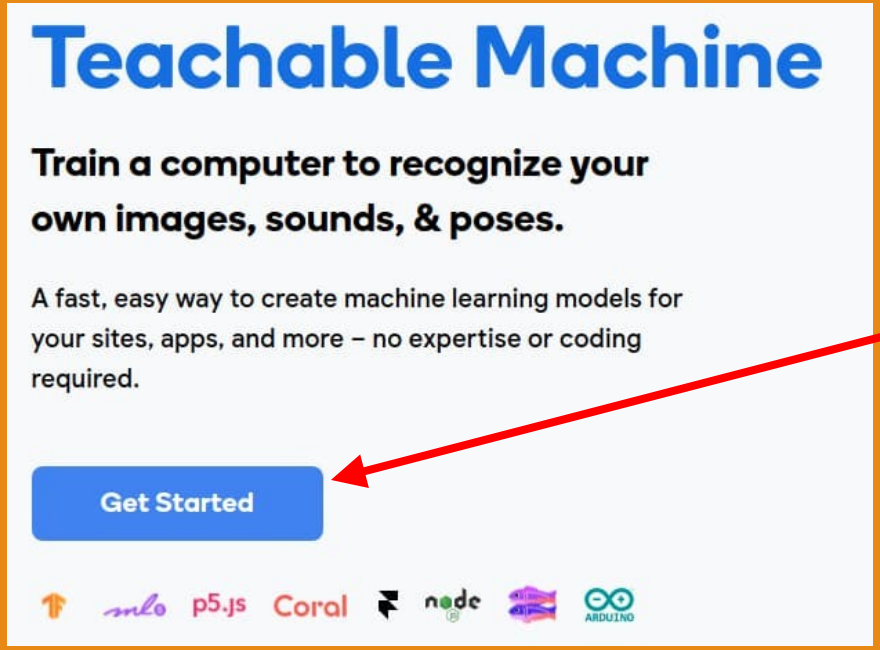
Teachable Machine

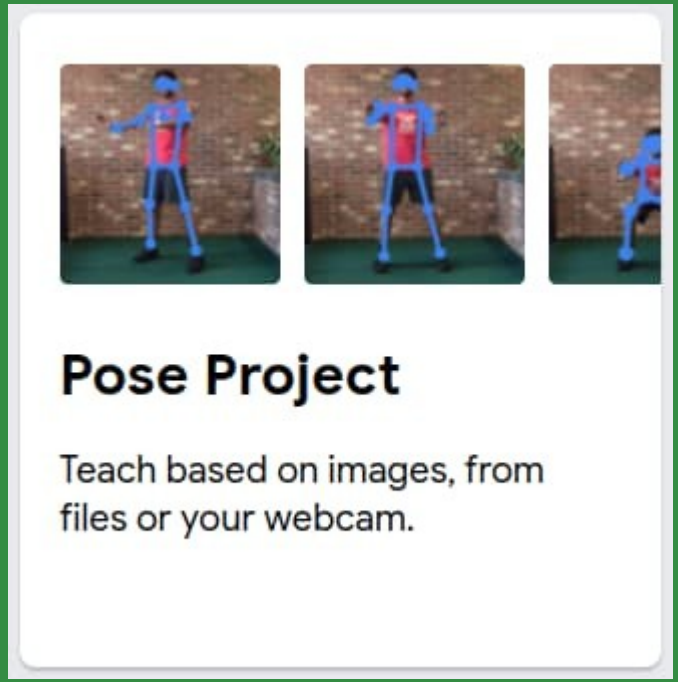
- Open https://teachablemachine.withgoogle.com



Click “Get Started”

Teachable Machine

- Select
“Pose Project”



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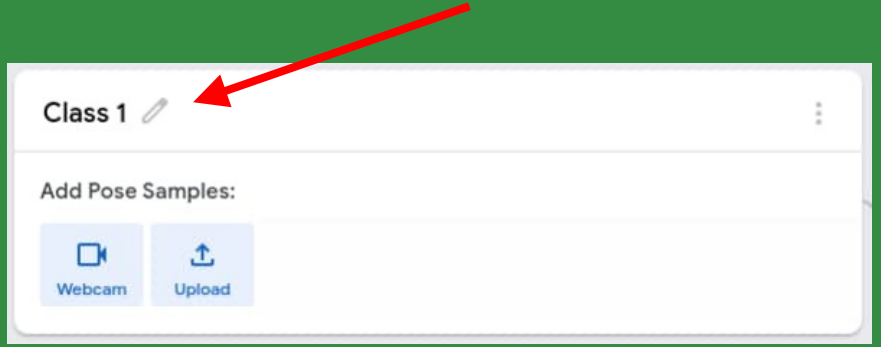
Sample Pose

- Give your class a suitable name
- Add more classes if you require it



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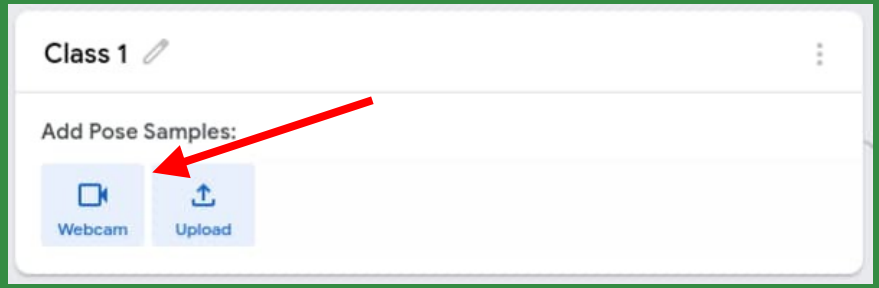
Sample Pose

- Click on the “Webcam” to record
- You can also record with your phone camera and upload it



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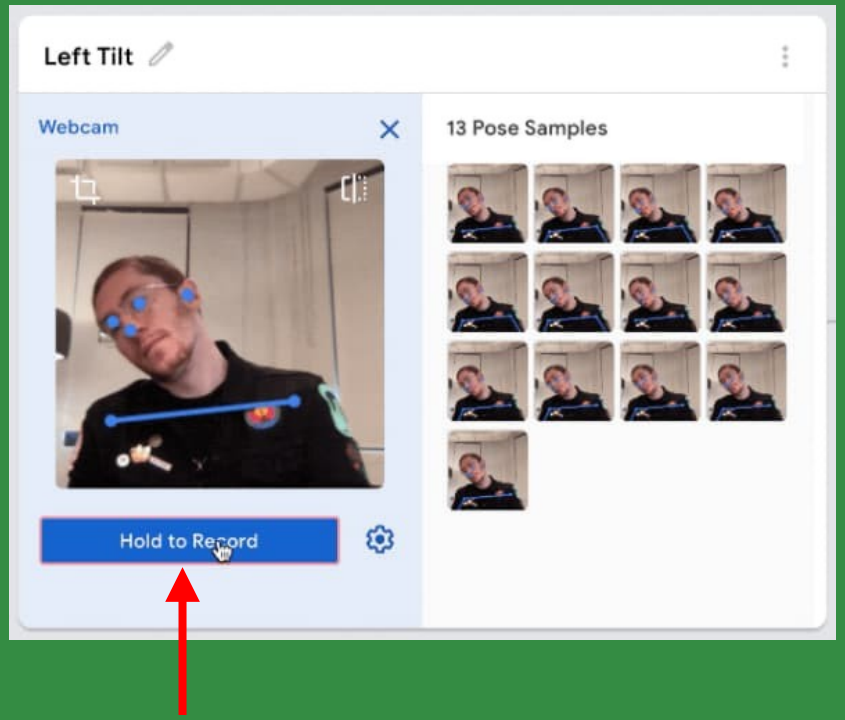
Sample Pose

- You may need help from a classmate to click record, while you perform the pose



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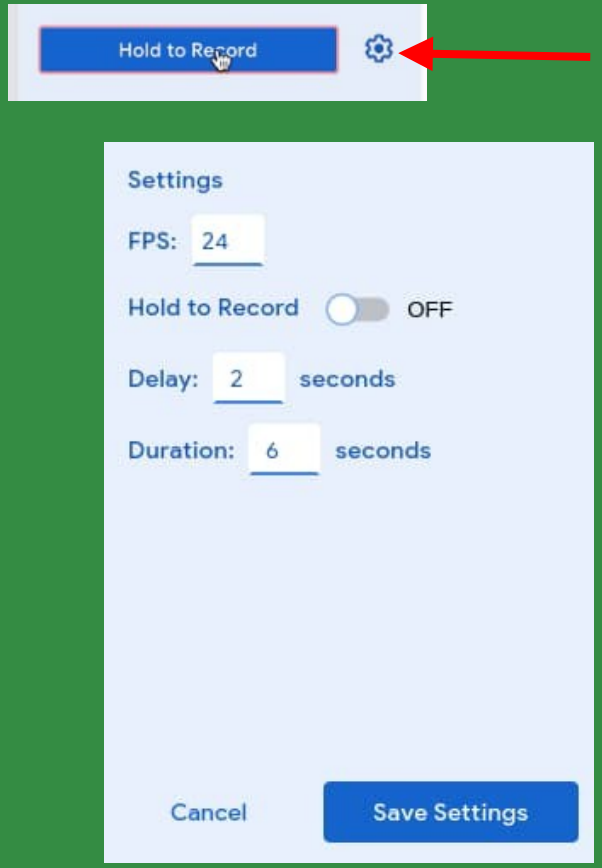
Sample Pose

- Alternatively, click the gear icon to change settings, then
  - Turn off “Hold to record”
  - Set a delay
  - Set a duration
  - Click “Record” then perform your pose before the delay ends



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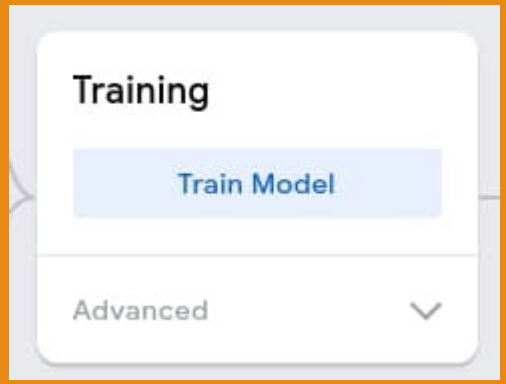
Train and Test



- Train the model
- This may take a while to complete

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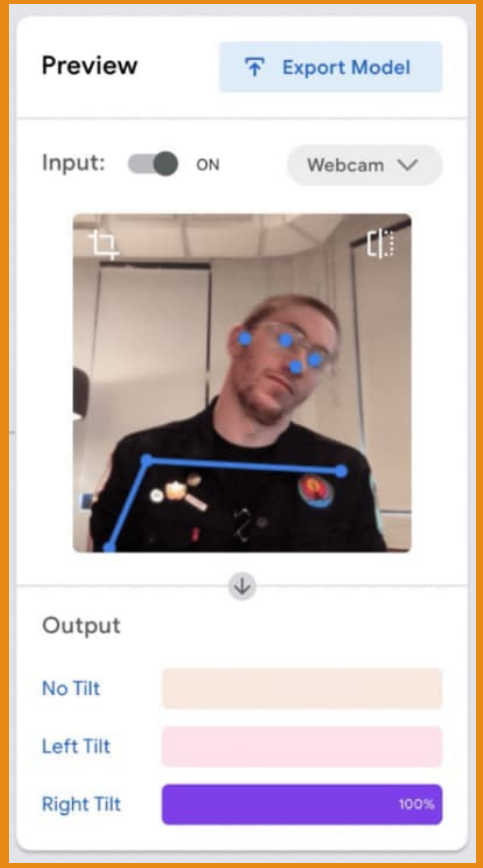
Train and Test



- Test out the model
- Make sure it works correctly
- Record more samples if needed

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Tips

- Distance matters! Train at different distances from the camera
- Train with slight differences in pose (eg. Tilt your head at different angles)
- Have a “Nothing” pose
- As always, increasing epoch can help

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Experiment

- Does it work with different people?
- How does having multiple people in view affects the training and results?
- Can you train it to differentiate between two people and one person in the camera view?

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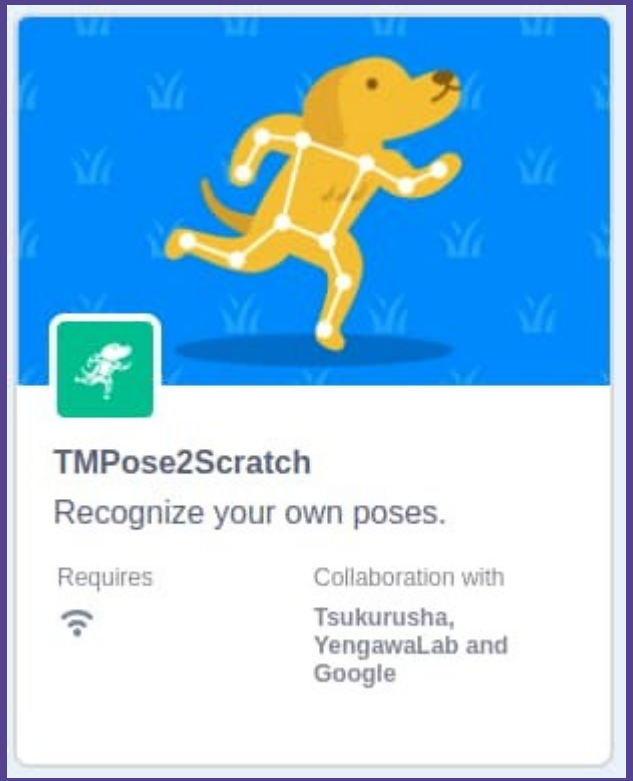
Adding the Extension



- Open https://stretch3.github.io/
- Add the “TMPose2Scratch” extension
- IMPORTANT! You should not have both the “TMPose2Scratch” and “TM2Scratch” extensions at the same time

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Using the Extension

- Load the model URL; you only need to do this once
- Detect pose using the “when received pose” or the “pose detected” blocks

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Twin Bee

- Vertical Shooter
- Use pose to control plane
- Plane should shoot continuously (...no need to press anything)
- Controls are up to you. You decide whether to have...
  - Left / Right only
  - Left / Right / Up / Down
  - Slow Left / Fast Left / Slow Right / Fast Right
  - Etc

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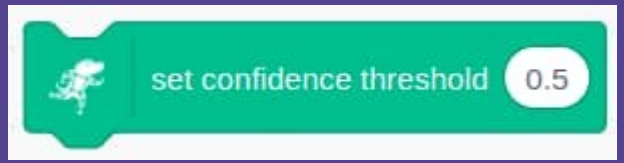
Tips



- For a fast paced game, you'll probably want to label more often
- Adjust the confidence threshold
  - False Positives: Increase threshold
  - False Negatives: Decrease threshold

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