
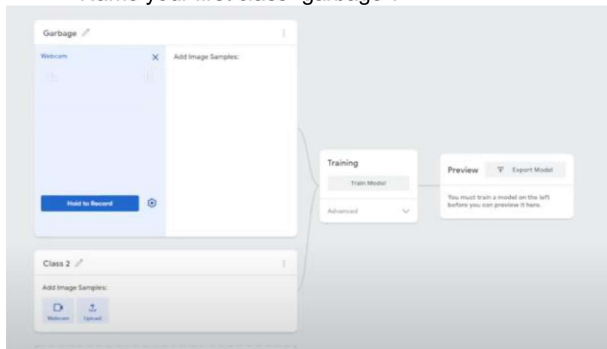



Activity

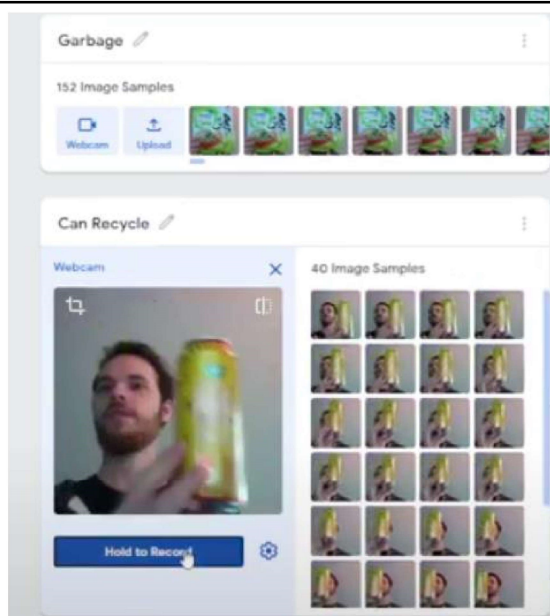
Part 1:

- Go to teachable machine : <https://teachablemachine.withgoogle.com/train>
- Click "get started". 
- Click on image project and the standard image.
- We are going to be training the machine to recognize various images and be able to sort the difference between garbage and recycling.
- Name your first class "garbage".

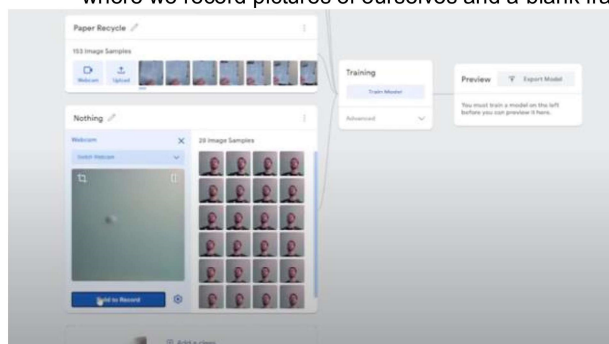


- Click on webcam button. 
- Hold up a piece of garbage that you have collected, and click & hold record. Move around the piece of garbage in the frame, so it can capture different angles. You are going to want about 200 pictures before stopping recording. More images is fine! That will train the machine better, but the more images we take for each class, the longer it will take to train our model later.
- Name your next class "can recycle".
- Take any can that you have collected and repeat the same steps as the garbage to record about 200 images of a can.
- Try to get images of all angles including all sides, the top & bottom etc.

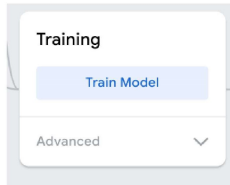
30 minutes



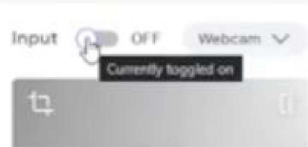
- Click on “add new class” and name it “paper recycling”.
- Repeat the same steps as before but holding up newspaper.
- For the final class, we want to make a class for “nothing”. This is where we record pictures of ourselves and a blank frame.



- This is so that the AI can be aware when we are holding up an image we want it to classify versus nothing. This can sometimes help increase the accuracy of our system. For this one, we want LOTS of images. Try 400 or so.
- The next step is to click on “train model”. This may take a few minutes (you cannot switch tabs when doing this).



- Once it is ready, you can preview and test your machine. Try holding up your piece of garbage and seeing if it can guess garbage. If it is not classifying well, you may need to go back and add more images and train it again.
- Next, you need to turn off your camera input.



- Finally, click export model



- Leave all the default settings and click "upload my model". It will give you a shareable link.