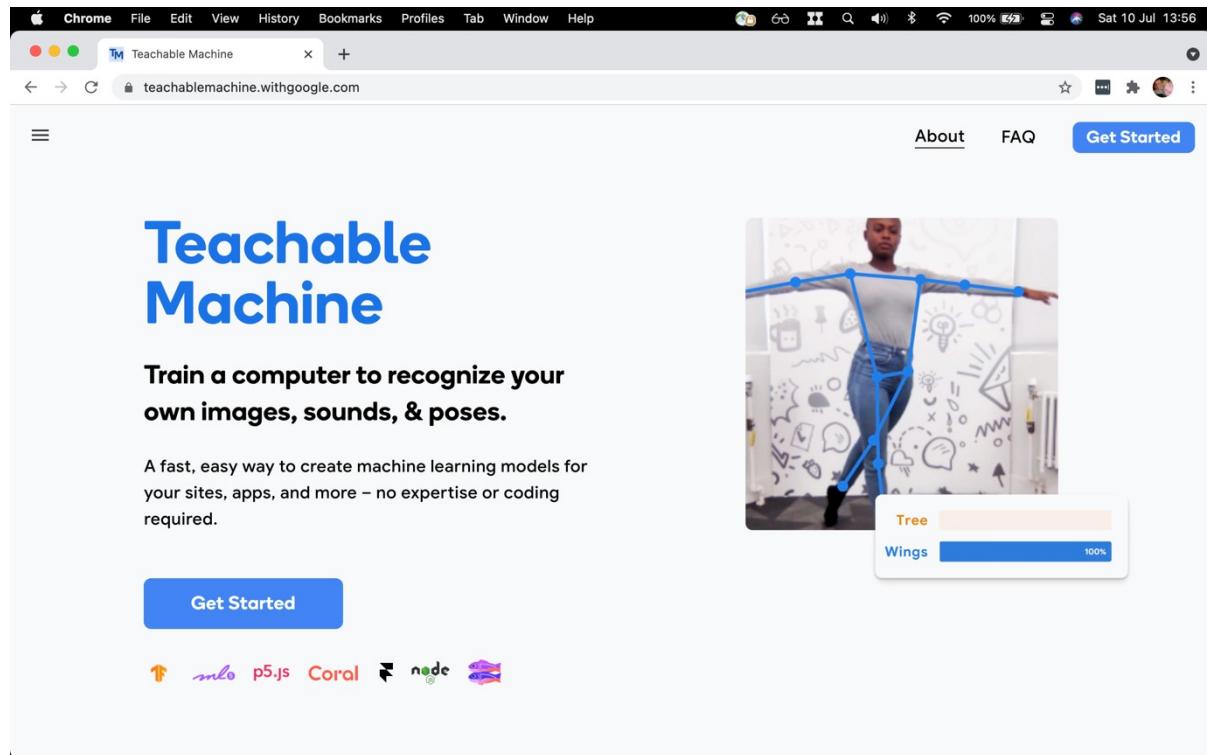


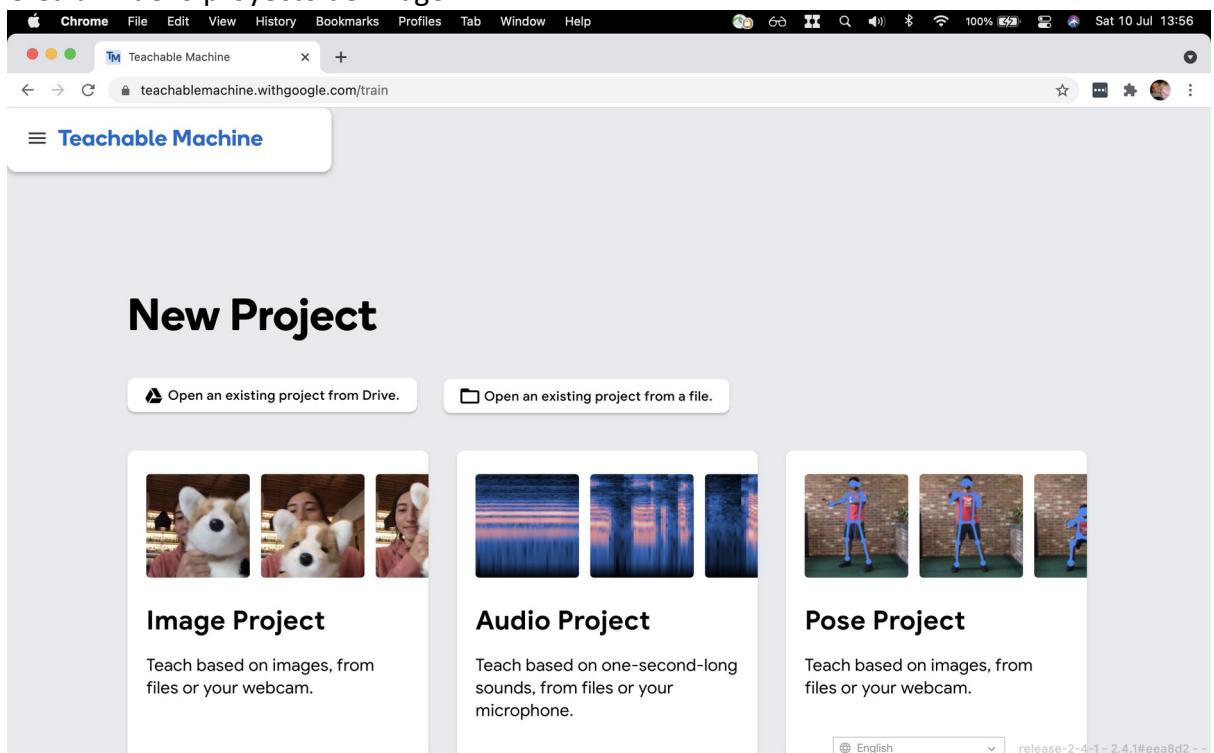
Instrucciones para crear el proyecto Scratch descrito en dalelane.co.uk/blog/?p=4447

-- Dale Lane

1. Ve a Teachable Machine

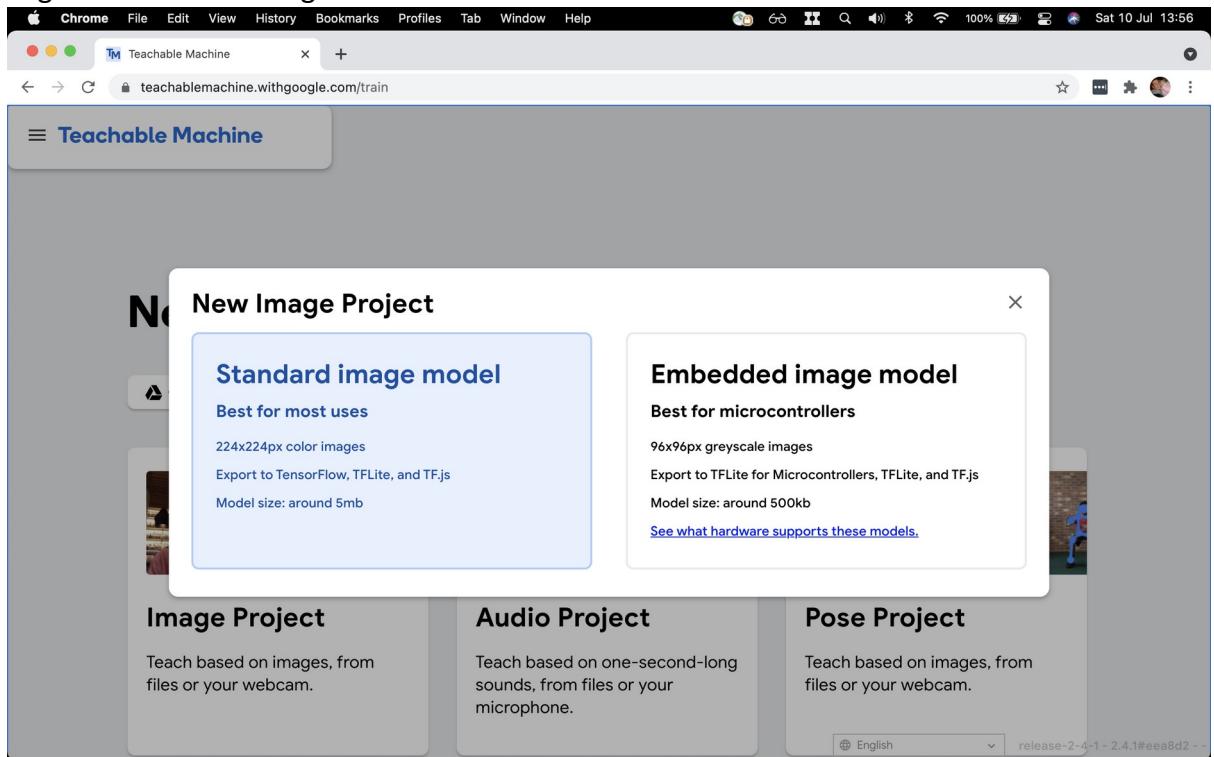


2. Crea un nuevo proyecto de imagen

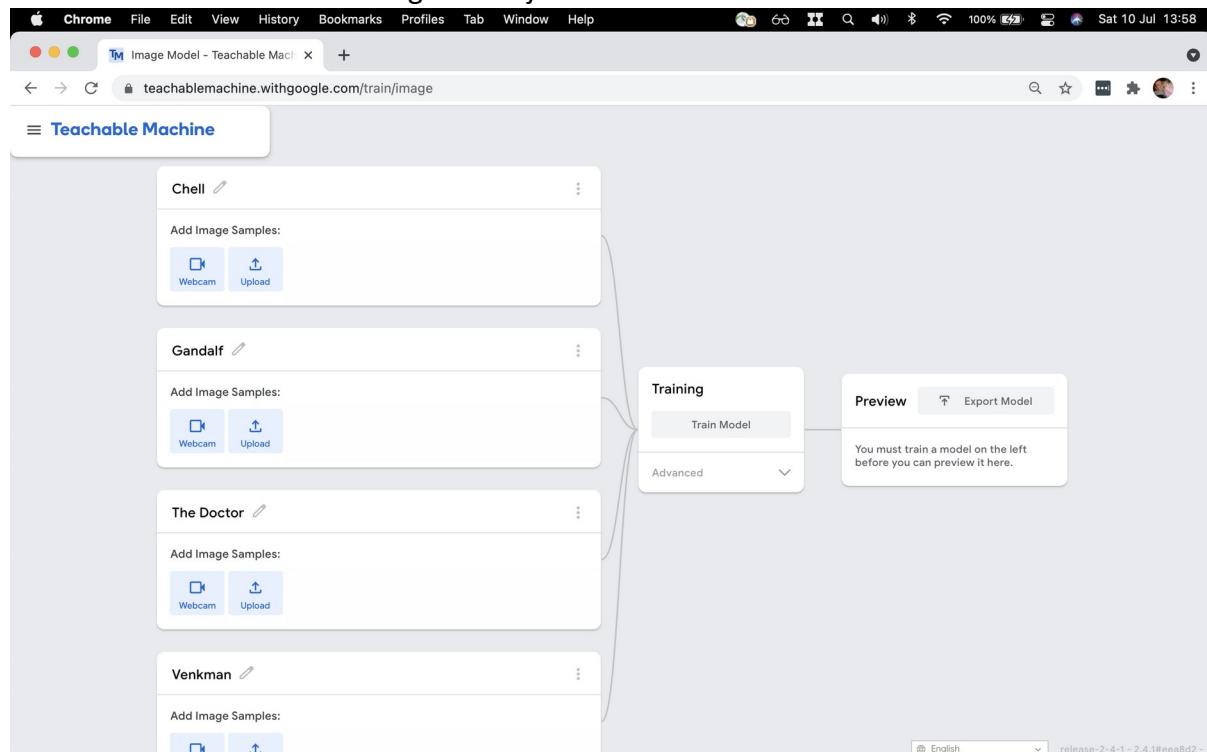


Este trabajo está licenciado bajo [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](#).

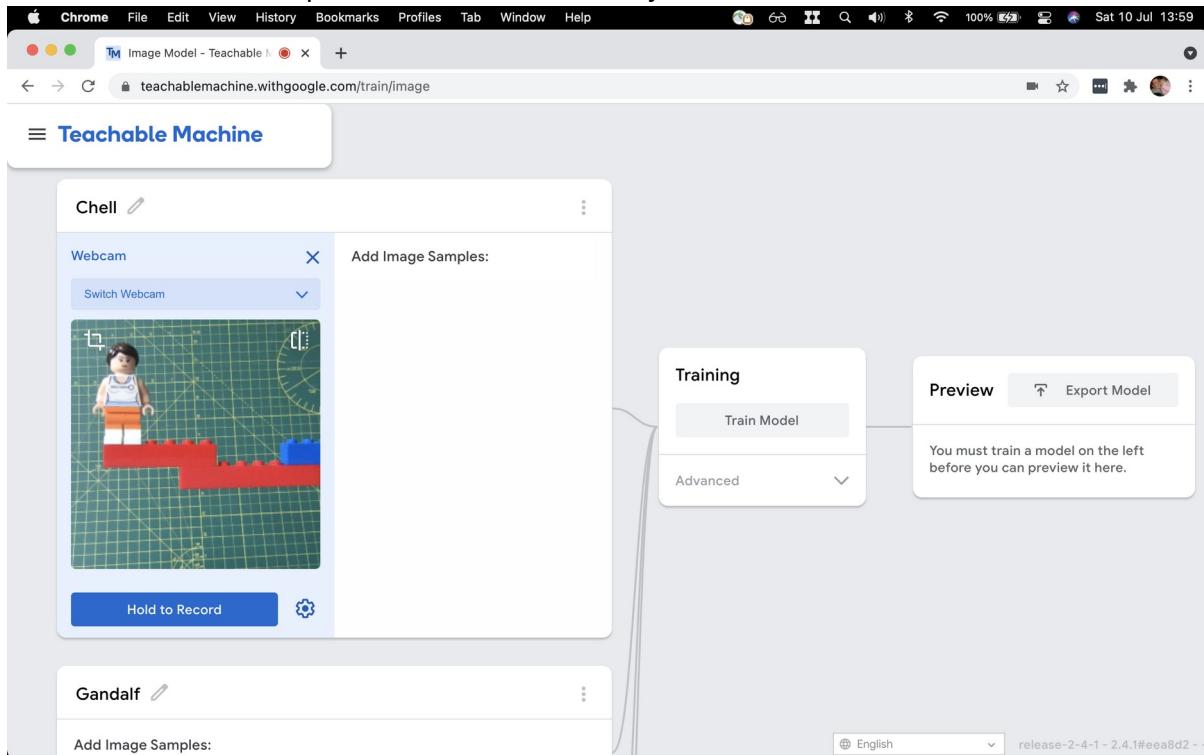
3. Elige el modelo de imagen estándar



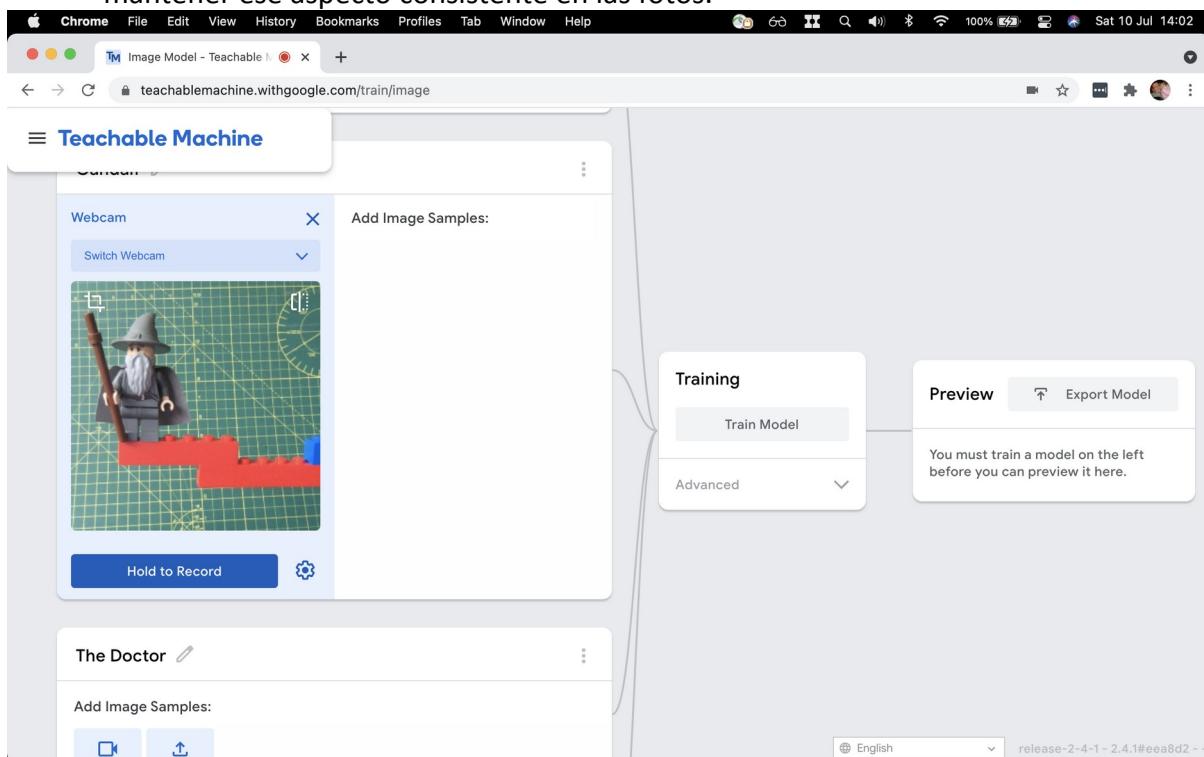
4. Clasifica las clases de algunos objetos



5. Usa la webcam para tomar fotos de los objetos

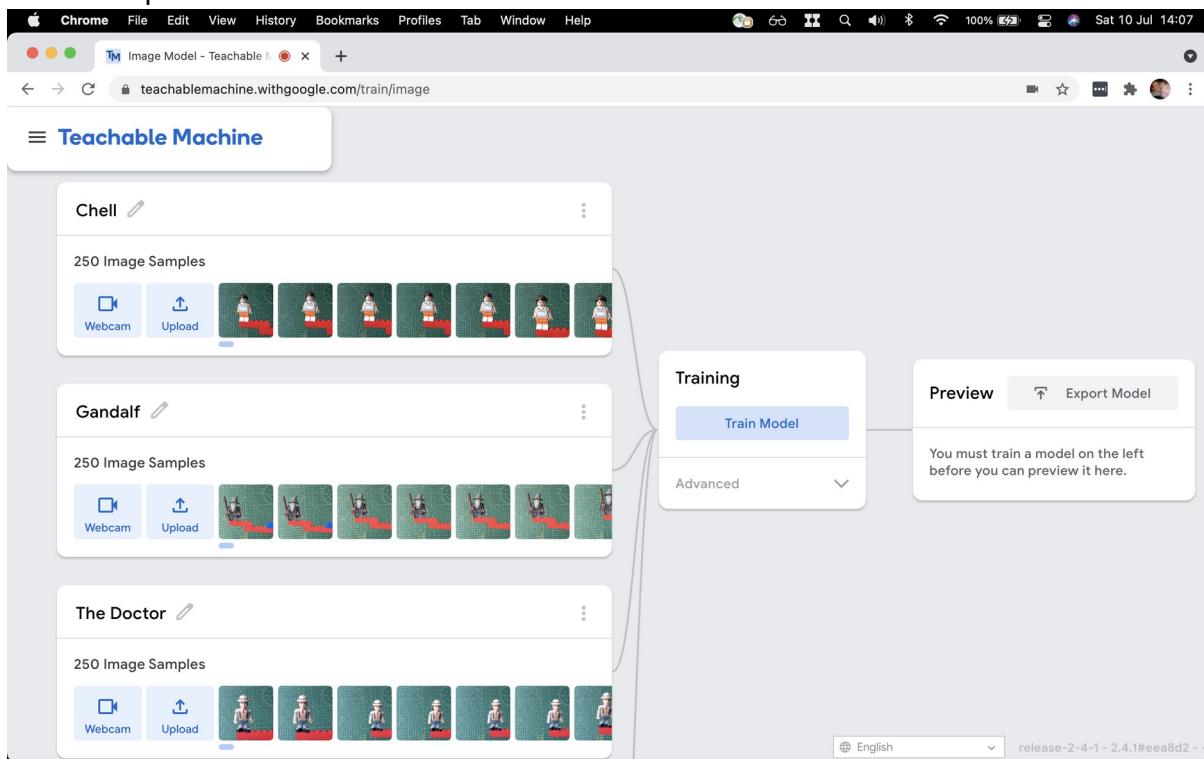


6. Usé piezas largas de LEGO en lugar de mi mano en las fotos, ya que era más fácil mantener ese aspecto consistente en las fotos.

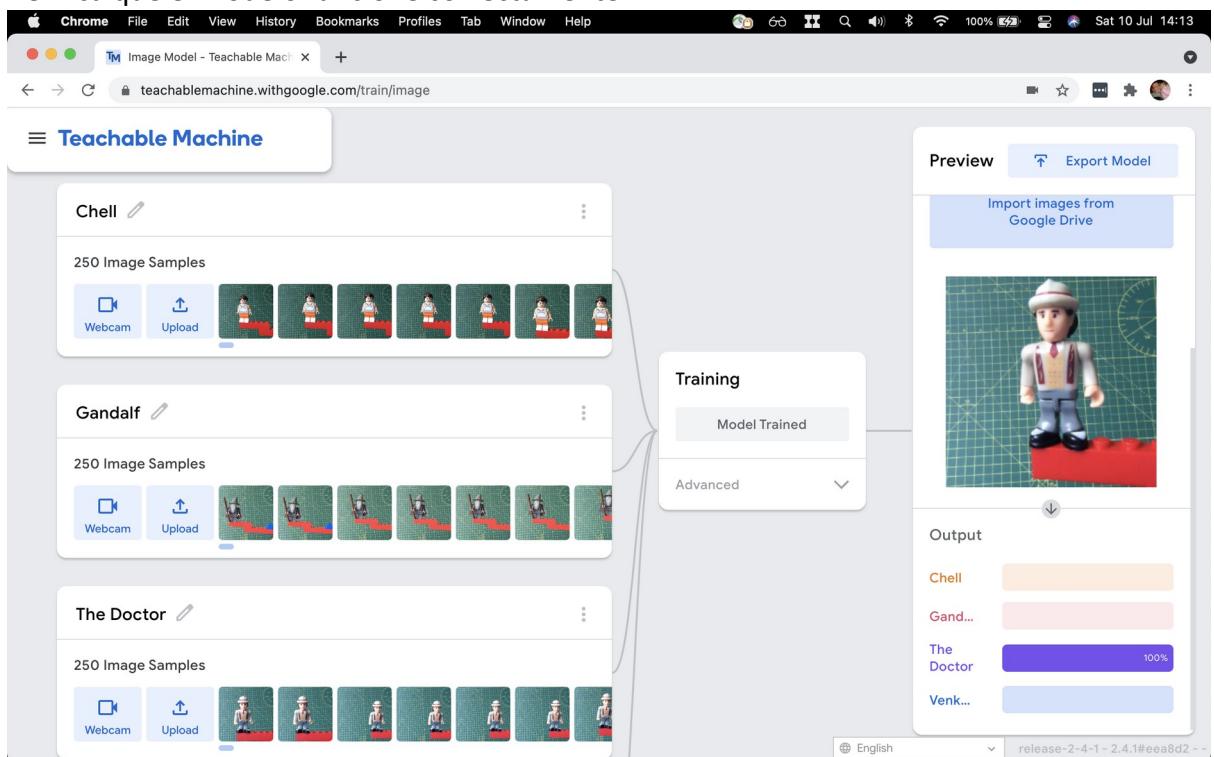


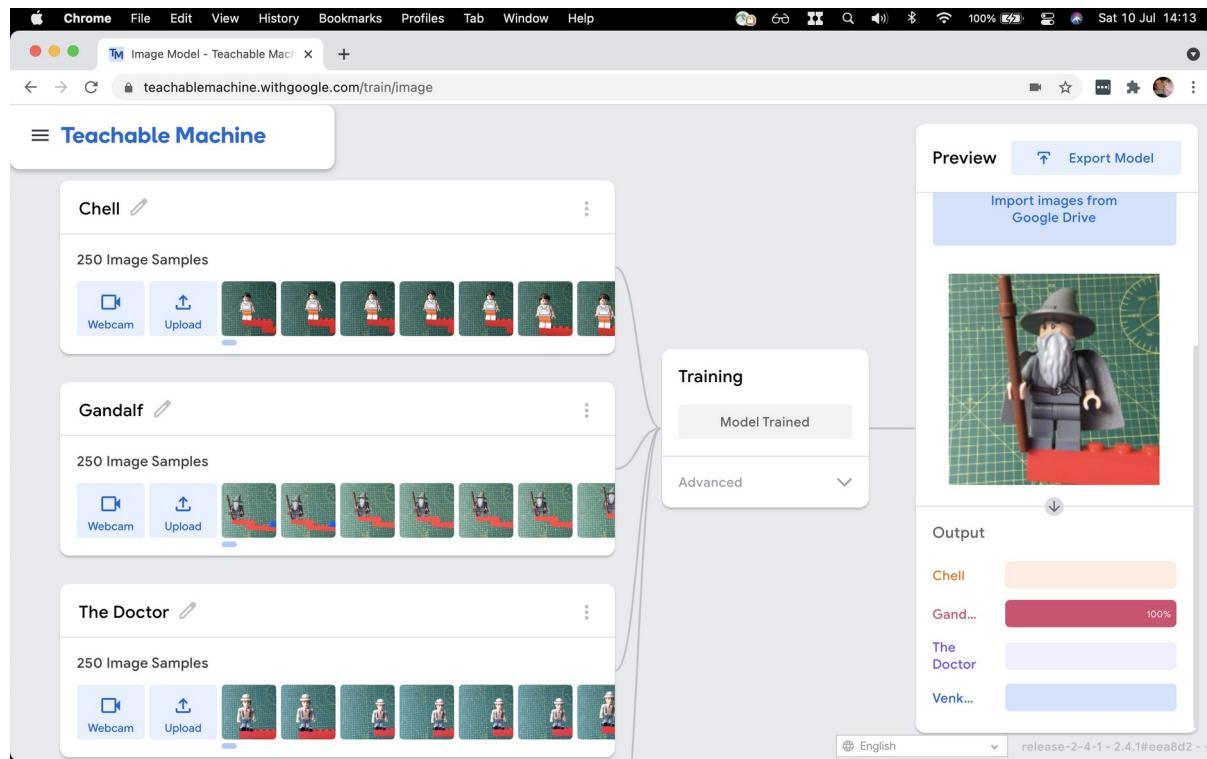
Reúne 250 ejemplos de cada objeto, en una variedad de posiciones, con un fondo consistente.

7. Empieza entrenando al modelo

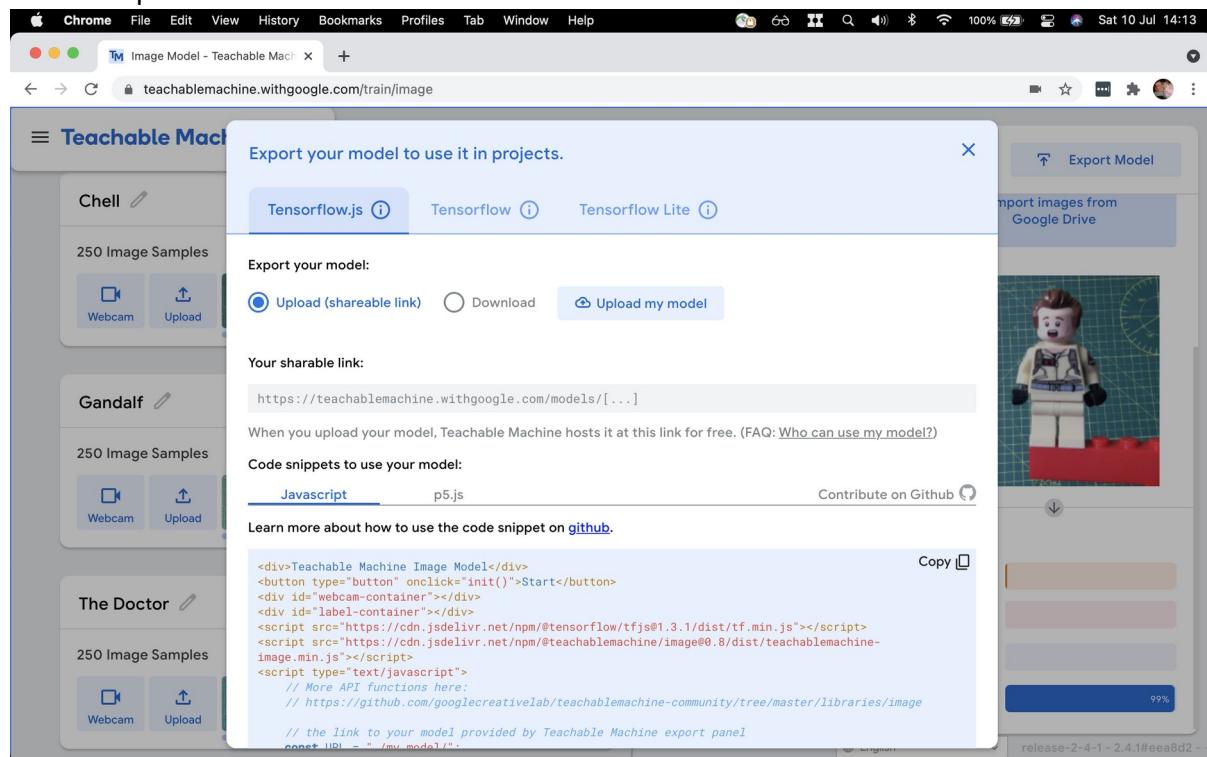


8. Verifica que el modelo funcione correctamente





9. Exporta el modelo



Este trabajo está licenciado bajo [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

10. Copia la URL del modelo

The screenshot shows the Teachable Machine interface with three projects listed: 'Chell', 'Gandalf', and 'The Doctor'. The 'The Doctor' project is selected. A modal dialog box titled 'Export your model to use it in projects.' is open. It contains tabs for 'Tensorflow.js' (selected), 'Tensorflow', and 'Tensorflow Lite'. Under 'Export your model:', there are three options: 'Upload (shareable link)' (radio button selected), 'Download', and 'Update my cloud model'. Below this, the 'Your sharable link:' field contains the URL <https://teachablemachine.withgoogle.com/models/HlxyfffcLa/>, with a 'Copy' button next to it. A note says, 'When you upload your model, Teachable Machine hosts it at this link for free. (FAQ: [Who can use my model?](#))'. A green checkmark indicates, '✓ Your cloud model is up to date.' At the bottom, code snippets for 'Javascript' and 'p5.js' are provided, along with a 'Contribute on Github' link and a 'Copy' button. On the right side of the interface, there's a preview of a lego figure of a doctor and a progress bar for a release.

11. Ve a <https://machinelearningforkids.co.uk/pretrained>

The screenshot shows the Machine Learning for Kids website. The top navigation bar includes links for 'About', 'Worksheets', 'Pretrained', 'Book', 'News', 'Help', and 'Log In'. The main content area has a title 'Pre-trained models'. A text box states: 'Machine Learning for Kids provides pre-trained models you can use in your projects. Real-world machine learning projects often use models already trained by other people. There are lots of well-trained models that are freely available, and these are useful when you don't have time to collect the amount of training data needed to train your own.' Below this, two cards are displayed: 'How to use' and 'Speech to text'.

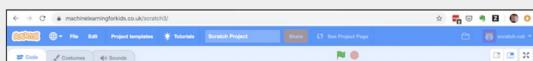
How to use

[Get started](#)

Click on the button to go to Scratch.

Go to the version of [Scratch 3](#) available from Machine Learning for Kids.

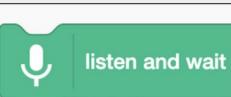
Pre-trained models are available from the Extensions panel. Click on the blue extensions button in the bottom-left of the Scratch window to find them, then click on the one you want to add to your project.



Speech to text

This model can be used to recognize speech recorded through your microphone.

It gives you a block you can use to record some audio and then give you the text that it recognized, and a block that you can tell it to listen out for a particular word or phrase.



12. Ve a la sección TensorFlow

The training data used for this model came from two-million user-generated comments posted on news articles.

It has been trained to recognize photos of one-thousand common objects. The machine learning model is based on MobileNet (a ML model designed for mobile devices, so it doesn't need much computing power).

It has been trained to recognize photos, and won't recognize cartoons or drawings very well.

It is a type of machine learning model called BERT which is useful for projects with text.

It has been trained using a set of questions and answers from Wikipedia articles collected by Stanford University called 'SQuAD'.

This is a complex model, so you might find that it is slow and needs a lot of memory on your computer!

TensorFlow beta

[Open a TensorFlow model](#)

TensorFlow is a toolkit for training and running machine learning models.

If you know how to create your own machine learning model with TensorFlow, click the button above to use it in Scratch.

You can [build your own model](#), using programming languages like Python.

Or you can use tools like [Teachable Machine](#) to easily train a TensorFlow model, and then make something with it in Scratch here.

[More...](#)

(Only image classifiers are supported today, but support for more types of machine learning model is coming soon!)

13. Copia la URL

The training data used for this model came from two-million user-generated comments posted on news articles.

It has been trained to recognize photos of one-thousand common objects. The machine learning model is based on MobileNet (a ML model designed for mobile devices, so it doesn't need much computing power).

It is a type of machine learning model called BERT which is useful for projects with text.

It has been trained using a set of questions and answers from Wikipedia articles collected by Stanford University called 'SQuAD'.

This is a new, experimental feature. Not all TensorFlow models work with Scratch here today, so if you have a model that doesn't work, please [let me know](#).

Where is the TensorFlow model?

What type of model is it?

[OPEN SCRATCH](#) [CANCEL](#)

Use a pre-trained TensorFlow model in Scratch

TensorFlow is a toolkit for training and running machine learning models.

If you know how to create your own machine learning model with TensorFlow, click the button above to use it in Scratch.

You can [build your own model](#), using programming languages like Python.

Or you can use tools like [Teachable Machine](#) to easily train a TensorFlow model, and then make something with it in Scratch here.

[More...](#)

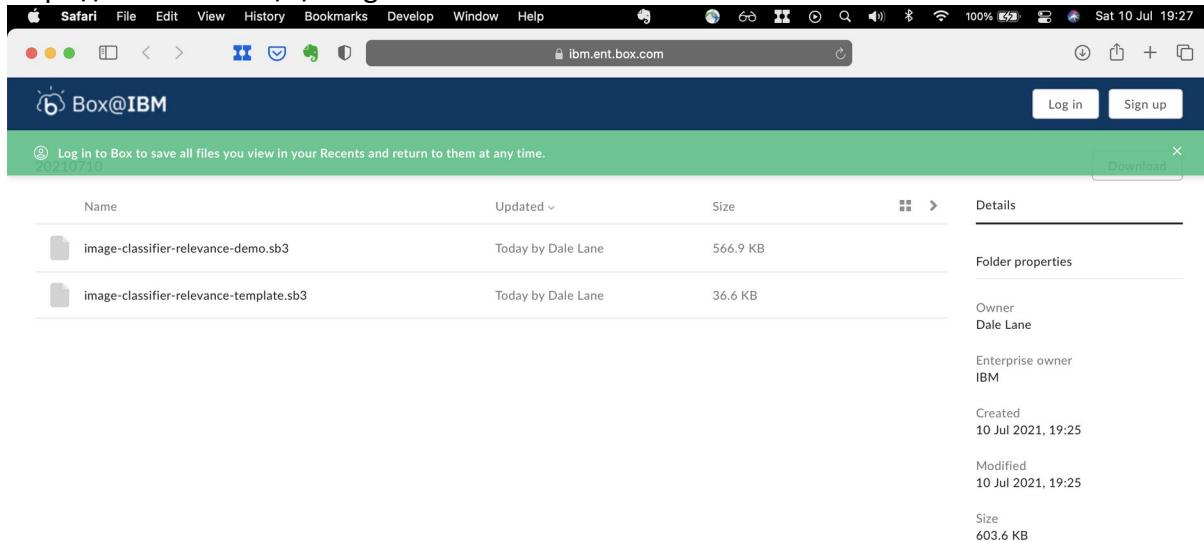
(Only image classifiers are supported today, but support for more types of machine learning model is coming soon!)

14. Haz clic en Open Scratch



Este trabajo está licenciado bajo [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](#).

Descargar image-classifier-relevance-template.sb3 desde
<https://ibm.box.com/v/image-classifier-visualisation>



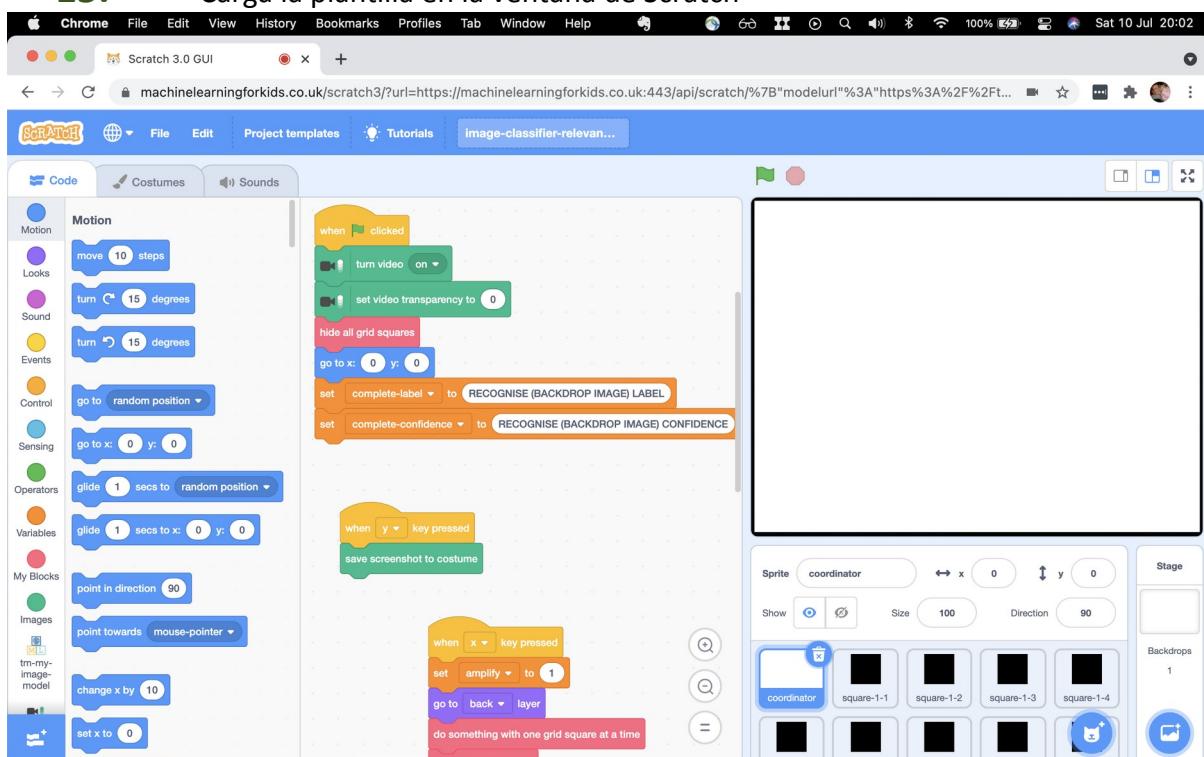
The screenshot shows a web browser window with the URL ibm.ent.box.com. The page displays a folder named 'Box@IBM' with two items:

- image-classifier-relevance-demo.sb3**: Updated today by Dale Lane, 566.9 KB.
- image-classifier-relevance-template.sb3**: Updated today by Dale Lane, 36.6 KB.

On the right side of the screen, there are detailed properties for the selected file ('image-classifier-relevance-template.sb3'):

- Owner**: Dale Lane
- Enterprise owner**: IBM
- Created**: 10 Jul 2021, 19:25
- Modified**: 10 Jul 2021, 19:25
- Size**: 603.6 KB

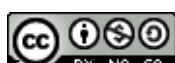
15. Carga la plantilla en la ventana de Scratch



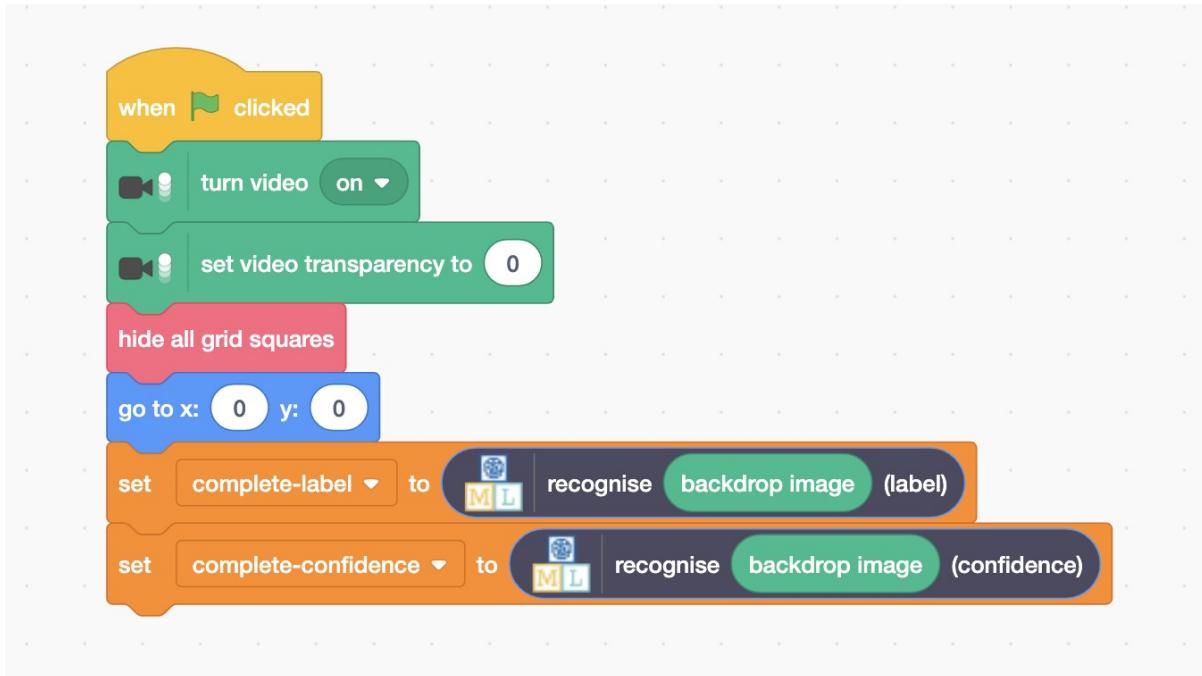
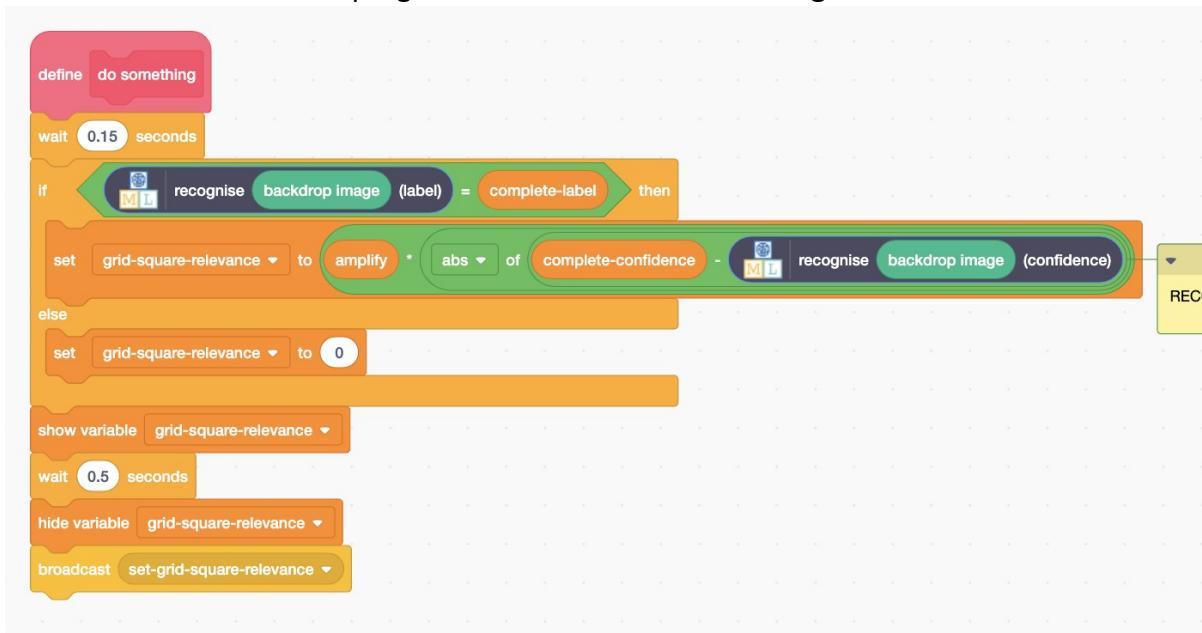
The screenshot shows the Scratch 3.0 GUI with the title bar 'Scratch 3.0 GUI'. The stage area is empty. The script editor contains the following script for the 'coordinator' sprite:

```
when green flag clicked
  [turn video on v]
  [set video transparency to 0 v]
  [hide all grid squares v]
  [go to x: 0 y: 0 v]
  [set complete-label to RECOGNISE (BACKDROP IMAGE) LABEL v]
  [set complete-confidence to RECOGNISE (BACKDROP IMAGE) CONFIDENCE v]
when y key pressed
  [save screenshot to costume v]
when x key pressed
  [set amplify to 1 v]
  [go to back layer v]
  [do something with one grid square at a time v]
```

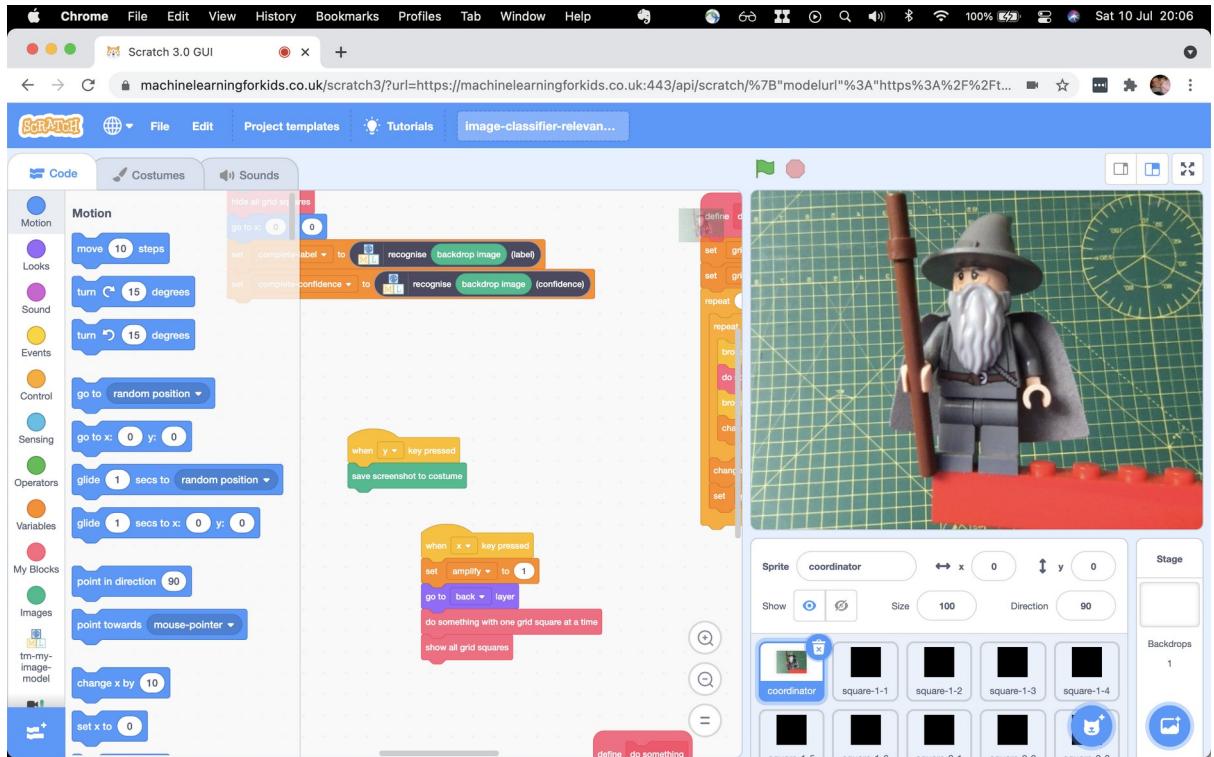
The script editor also shows other scripts for the 'coordinator' sprite and a 'grid square' sprite. The stage area is empty.



Este trabajo está licenciado bajo [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

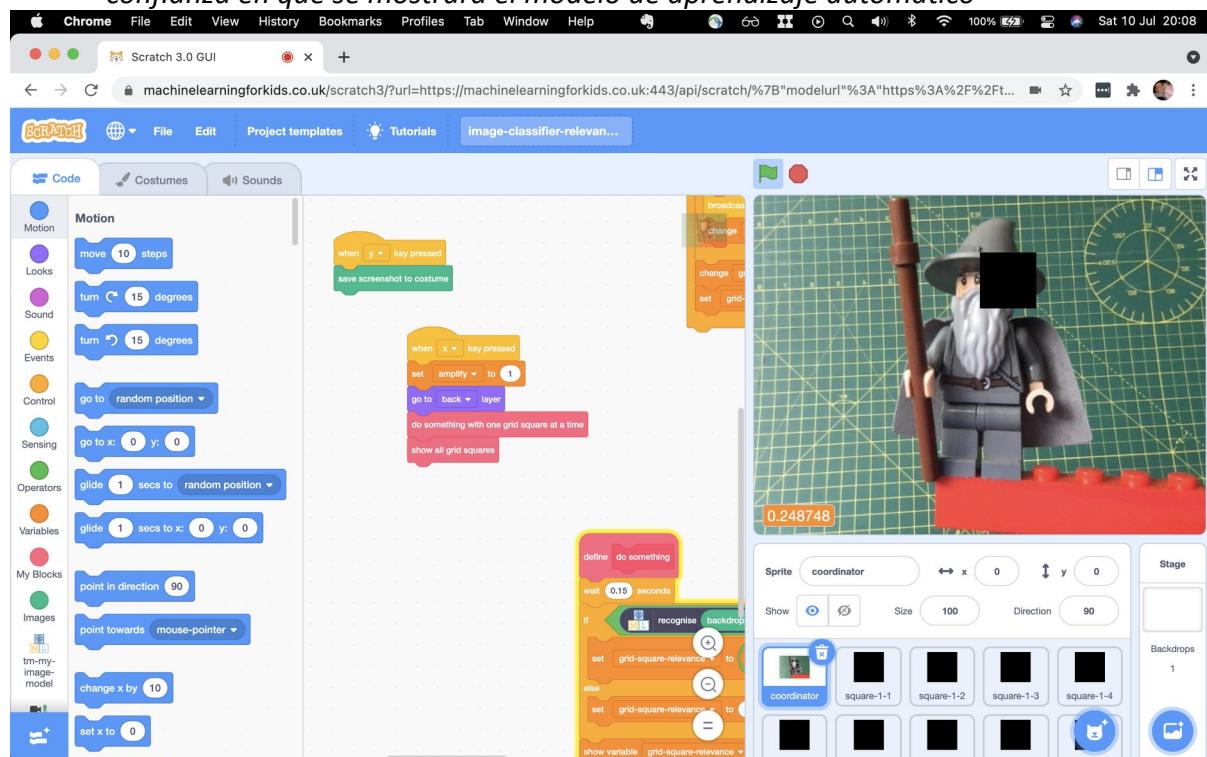
16. Actualiza la programación de “al hacer clic en Bandera Verde”**17.** Actualiza la programación “define do something”**18.** Haz clic en la Bandera Verde

19. Presiona la tecla "Y" para tomar una captura de pantalla de la vista de tu cámara web

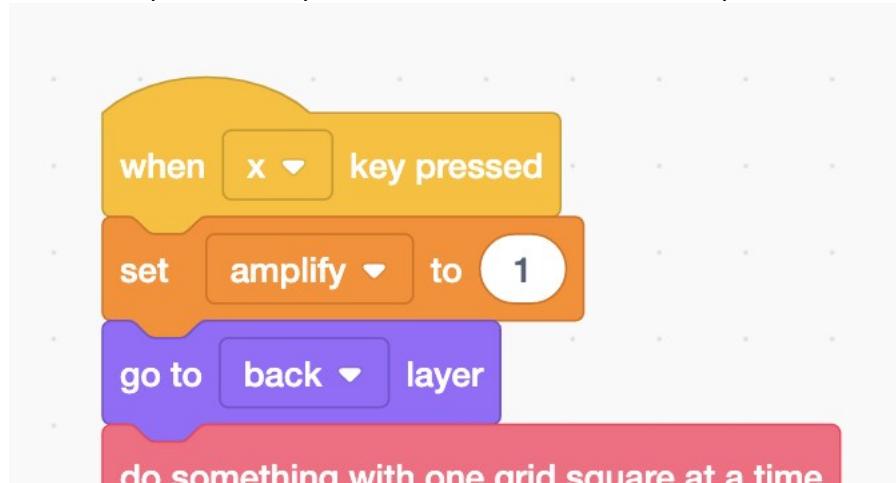


20. Haz clic en la Bandera Verde y luego presiona la tecla "X"

El cuadrado se mostrará en cada ubicación a su vez, y la diferencia que hace en la confianza en que se mostrará el modelo de aprendizaje automático

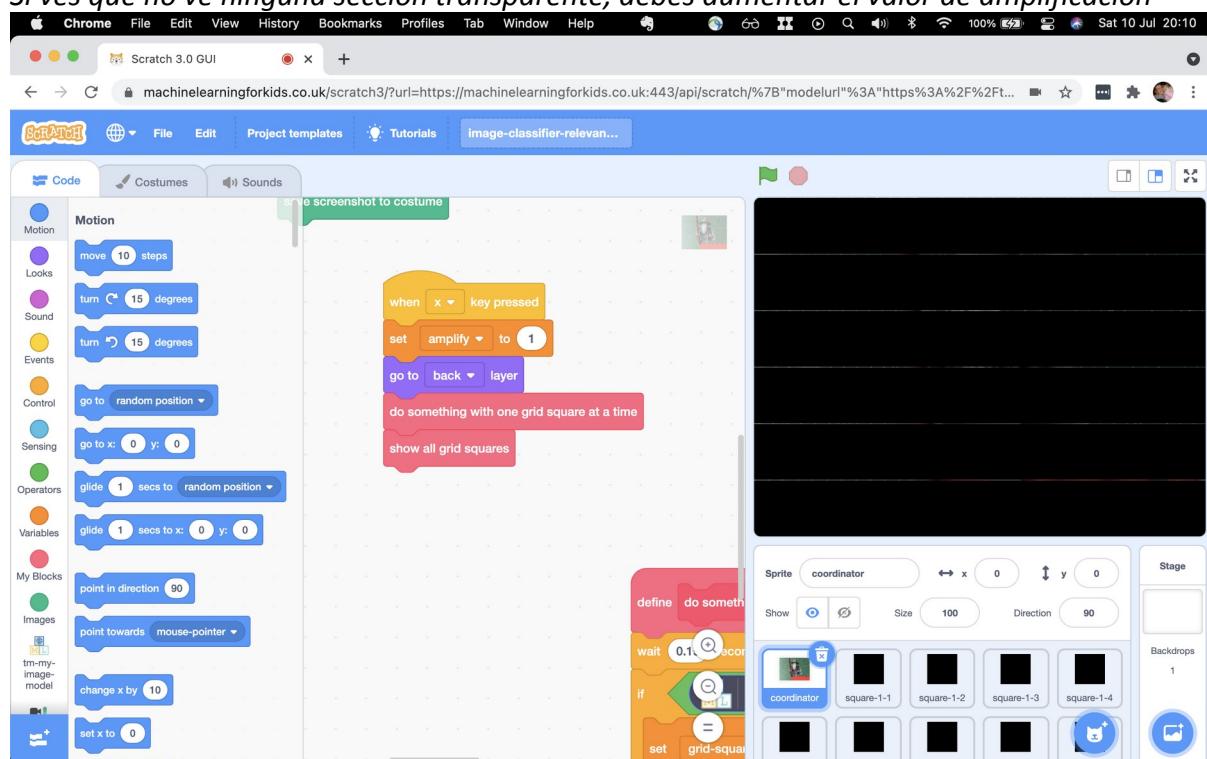


- 21.** Encuentra el código donde está configurada la variable "amplify"
Deberás experimentar para encontrar el valor correcto para esta variable.

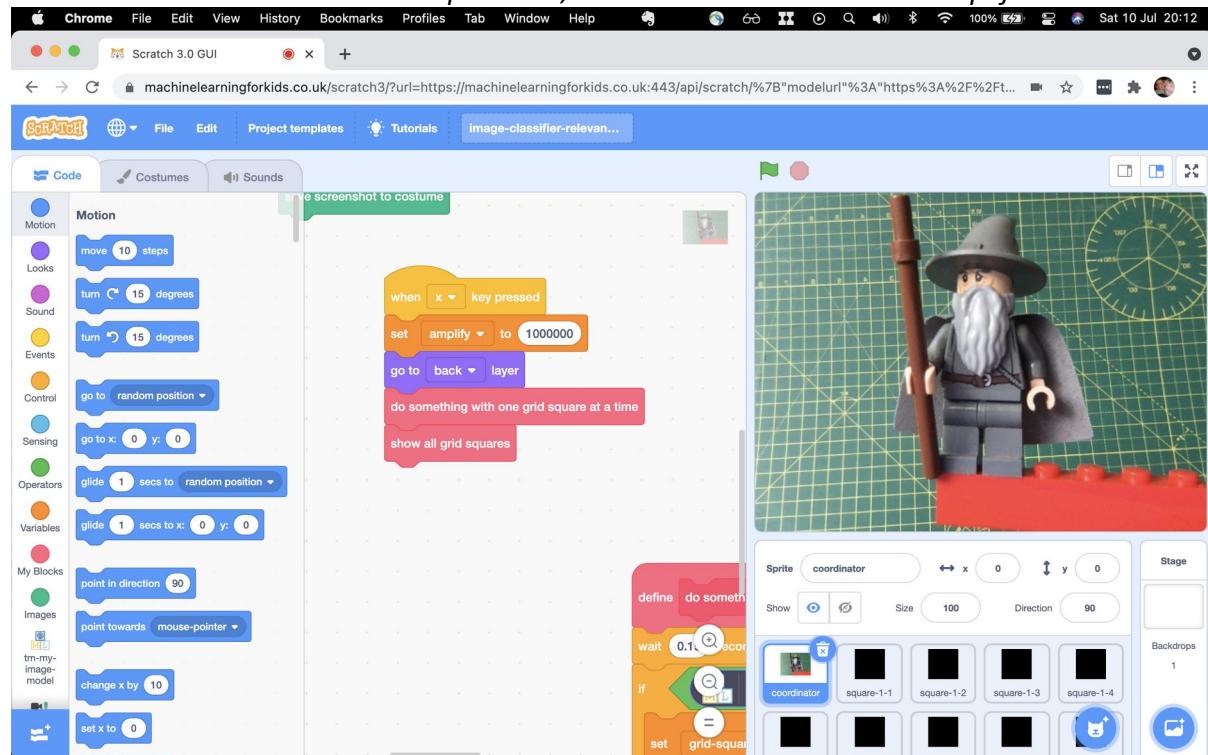


Cada vez que cambies el valor de amplificación, deberás volver a ejecutar la prueba: Haz clic en la Bandera Verde y luego presiona la tecla “X”

Si ves que no ve ninguna sección transparente, debes aumentar el valor de amplificación



Si ves demasiadas secciones transparentes, debes disminuir el valor de amplificación



Ajustar "amplify" al valor correcto debería resaltar las áreas significativas de la cámara web

