

01 Getting started

- Go to “<https://machinelearningforkids.co.uk/>” in a web browser.
- Click on “**Get started**”.
- Click on “**Try it now**”.
- Click the “**+ Add a new project**” button.



02

Project Name *

Chameleon

Recognising *

images

CREATE

- Name your project “**Chameleon**” and set it to learn how to recognise “**images**”.
- Click the “**Create**” button

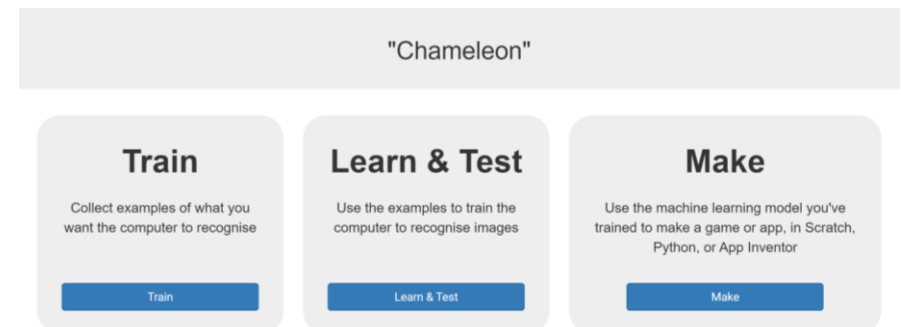
Challenge

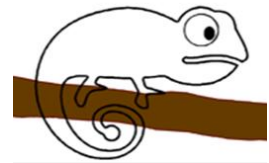
In this activity, you will train a machine learning model to recognise colours by uploading pictures of coloured objects. You will use this in Scratch to make a character that recognises the colour and changes costume to match.



03

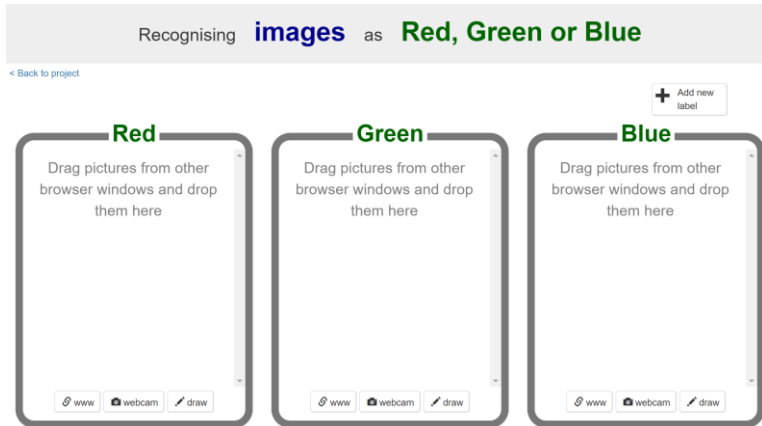
You should now see Chameleon in the list of your projects. Click on it. You need examples to train the computer. Click the “**Train**” button.





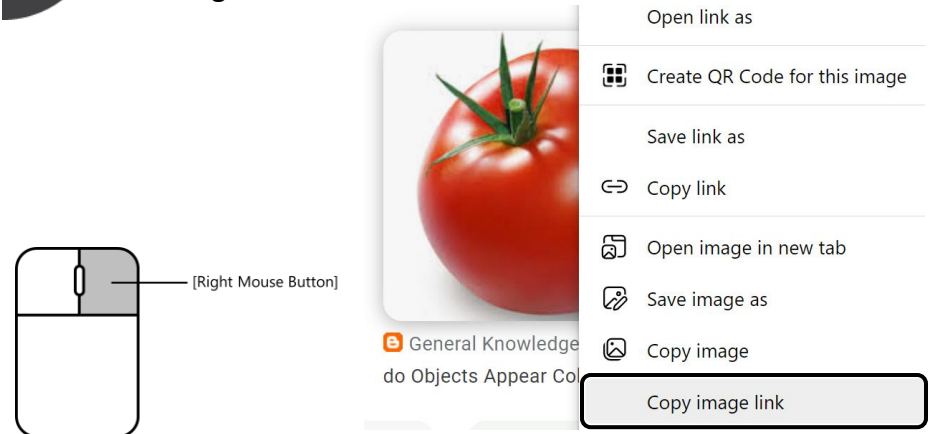
04

- Click on “+ Add new label” and call it “Red”.
- Create two more buckets called “Green” and “Blue”.



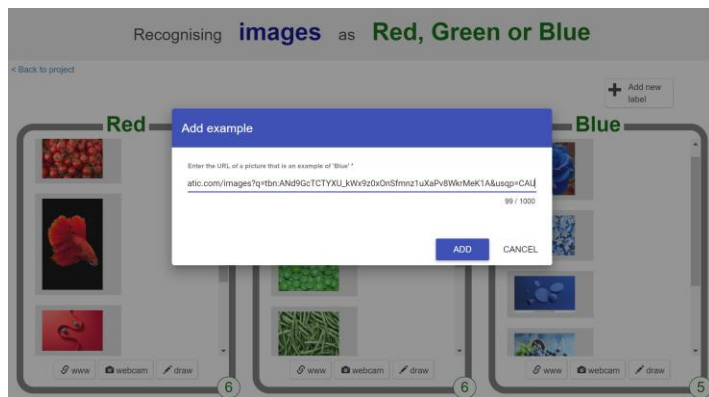
05

- Find Red, Green and Blue images online and copy the image addresses.



06

- Click the “www” button in the “Red” bucket, and paste in the web address of a red image.
- Repeat this for Green & Blue. (You’ll need at least 6 of each)



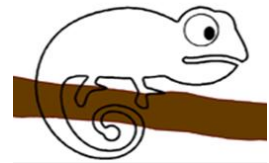
07

- Click on the “< Back to project” link.
- Click on the “Learn & Test” button.
- Click on the “Train new machine learning model” button.

As long as you’ve collected enough examples, the computer should start to learn how to recognise red, green and blue images.

Info from training computer:

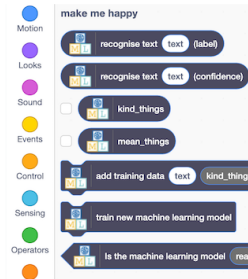
Train new machine learning model



08 Testing your results in Scratch

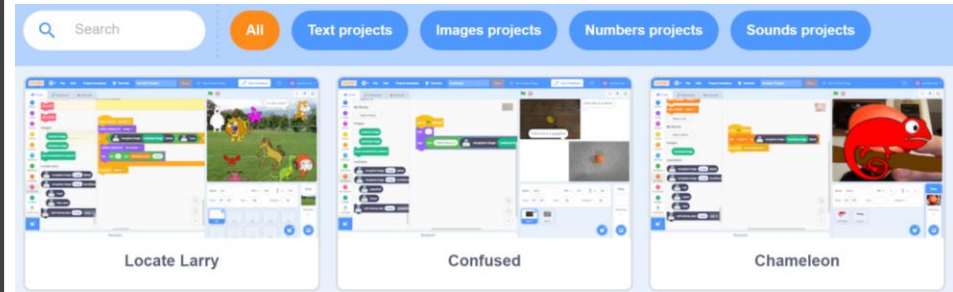
You've started to train a computer to recognise text as being kind or mean. This type of learning is called "**Supervised Learning**" because of the way you are supervising the computer's training.

- Click the "**< Back to project**" link
- Click the "**Make**" button
- Click the "**Scratch 3**" button
- Click the "**Open in Scratch**" button



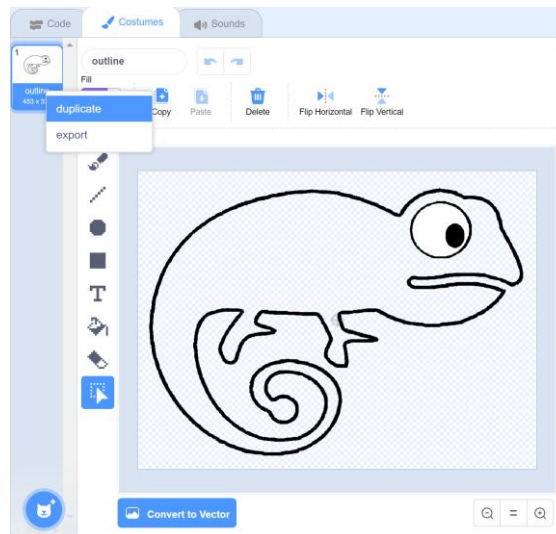
You should see new blocks from your project at the bottom of the list.

- ## 09
- Click on "**Project templates**".
 - Select "**Chameleon**".



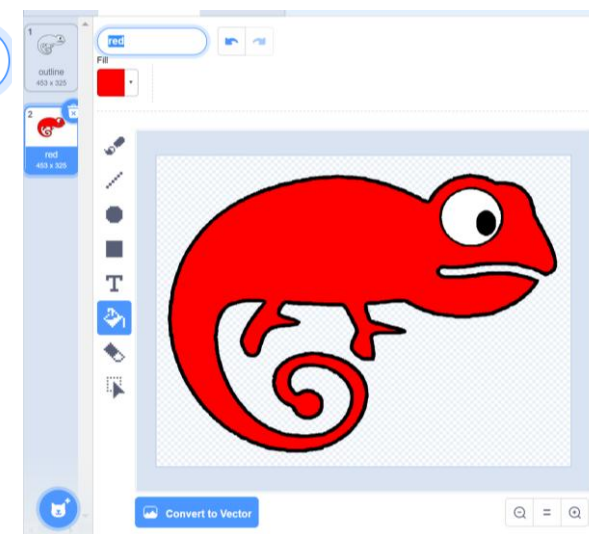
10

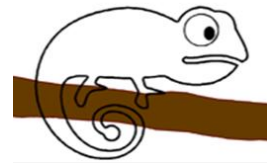
- Click on the "**Costumes**" tab.
- Right click on **outline** and select "**Duplicate**".



11

- Name the image "**Red**".
- Click on the "**Fill**" tool.
- Fill the Chameleon with "**Red**".





12

Green

Blue

- Repeat step 11 for "Green" and "Blue".

13

- Click on the "Backdrop" button and select "Update Backdrop".
- Upload or choose a "green" background image.

2

14

Click the "Code" tab and enter the following script.

```

when clicked
  switch costume to Outline
  forever
    switch costume to recognise image backdrop image (label)
  
```

15

- Click the "green flag" button to test your code.
- Test your model by using different coloured background images.