Raspberry Pi Foundation

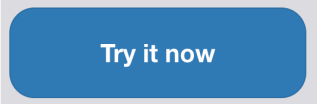
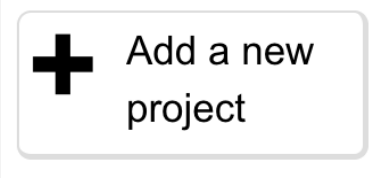
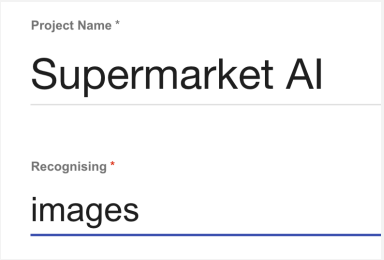
Supermarket AI application – Training a model

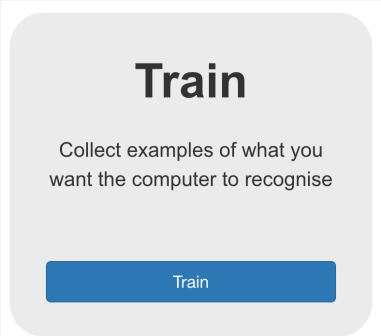
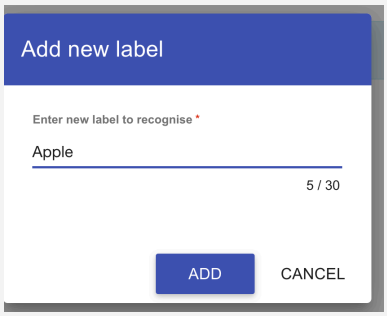
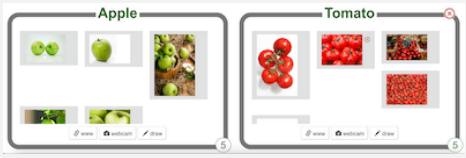
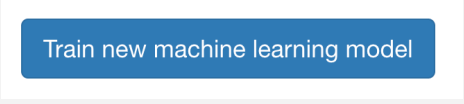
A supermarket has asked you to create a machine learning model that will recognise images of apples and tomatoes.

Websites to open:

- Machine Learning for Kids (machinelearningforkids.co.uk)
- Training and test data (ai-activities.raspberrypi.org/project-files)

Your first task is to set up and train your model by completing the following steps:

1	Open the website Machine Learning for Kids (machinelearningforkids.co.uk).	
2	Select **Get started**, then **Try it now**.	
3	Select **Add a new project**.	
4	Give the project a name and set it to recognise images. Select **CREATE**. Once created, click on the project title.	

5	Select **Train**.	
6	Select **Add new label** and create a label for the class of apples. Repeat this step to create a second label for the class of tomatoes.	
7	Visit the following webpage to find the data set you can use to train your model: Apples and Tomatoes (ai-activities.raspberrypi.org/project-files)	
8	Look through the training data and choose **5 images of apples** and **5 images of tomatoes** from the data. Drag and drop your chosen images into the relevant class (Apple or Tomato).	
9	Select **Back to project**. Next, select **Learn & Test**.	
10	Your model is ready to be trained. Select **Train new machine learning model**.	

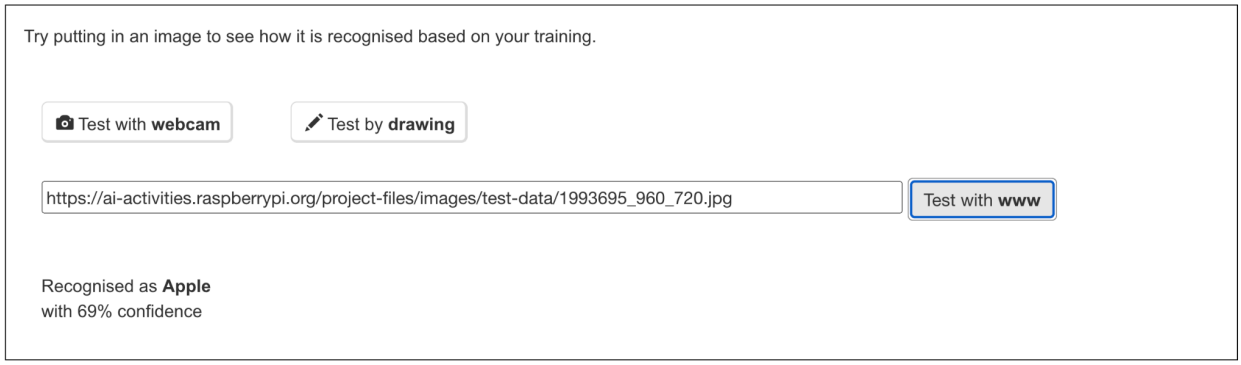
Testing your model

Now that you have trained your model, it is time to test it to see how successful it is.

Some data has been kept aside to use as test data. You can find the images at the bottom of the webpage hosting the data set (ai-activities.raspberrypi.org/project-files).

To see how successful your model is at classifying the test data, test your model with some of the images:

- Drag and drop an image into the link box (next to the **Test with www** button — see the image below)
- Alternatively, you can:
    - **Right-click** on an image
    - Select **Copy image address**
    - Paste the image address into the link box
- Select **Test with www**



Questions

Once you have tested a few of the images, answer the following questions:

Describe the results of your testing.	
How could you improve the model?