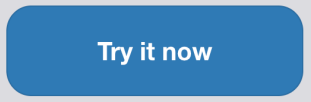
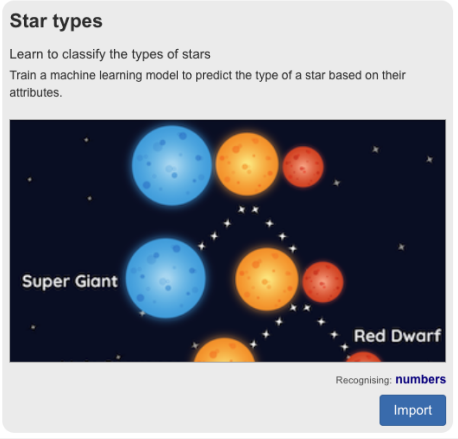
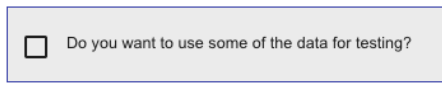


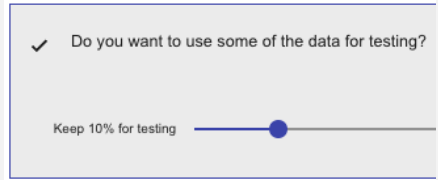
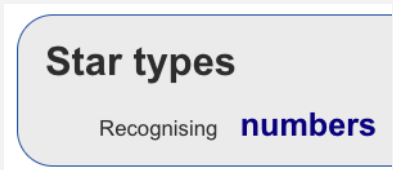
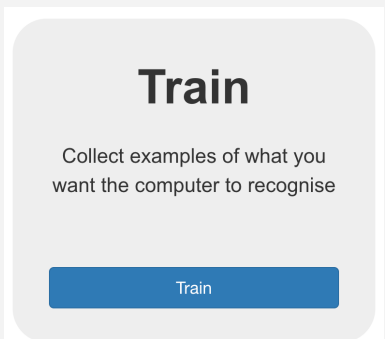
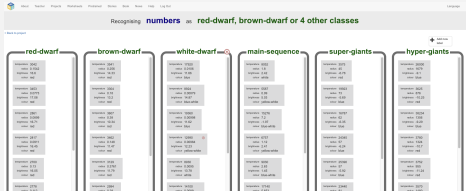
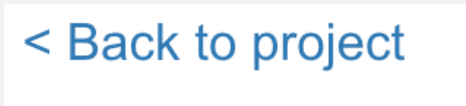
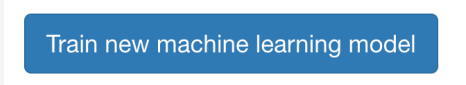


Star types – Training a decision tree

Rather than creating a decision tree by hand, you can use machine learning to create one. You are going to create a decision tree with all 241 stars in the data set.

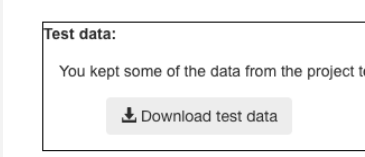
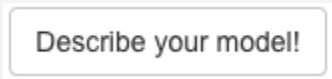
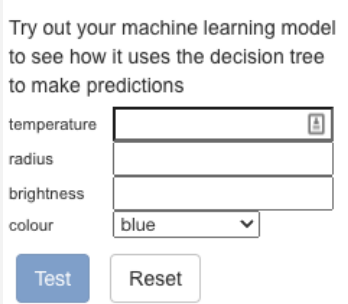
Your first task is to set up and train your model by completing the following steps:

1	Open the website Machine Learning for Kids (machinelearningforkids.co.uk).	
2	Select Get started , then Try it now .	
3	Select Copy template .	
4	Scroll to the Star types template and click on Import .	
5	Tick the box that says “Do you want to use some of the data for testing?”	

6	Use the slider to select the percentage of data you want to keep back for testing. This is up to you but anything between 10% and 30% will work well.	
7	Click on IMPORT .	
8	Open the new Star types project that has just been created.	
9	Select Train .	
10	Look through the training data and the classes that have been created for you.	
11	Select Back to project. Next, select Learn & Test.	
12	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.

1	Click on Download test data . This will download a spreadsheet of test data, which you should open.	
2	Select Describe your model! to see your decision tree.	
3	Choose three sets of star data to use for testing. You can copy the data into the table below.	
4	Input your test data into the form provided to see what your decision tree would label the data.	

Test data

Here is a space to copy the data for three stars from your spreadsheet:

Star number	Temperature	Radius	Brightness	Colour	Type
1					
2					
3					



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