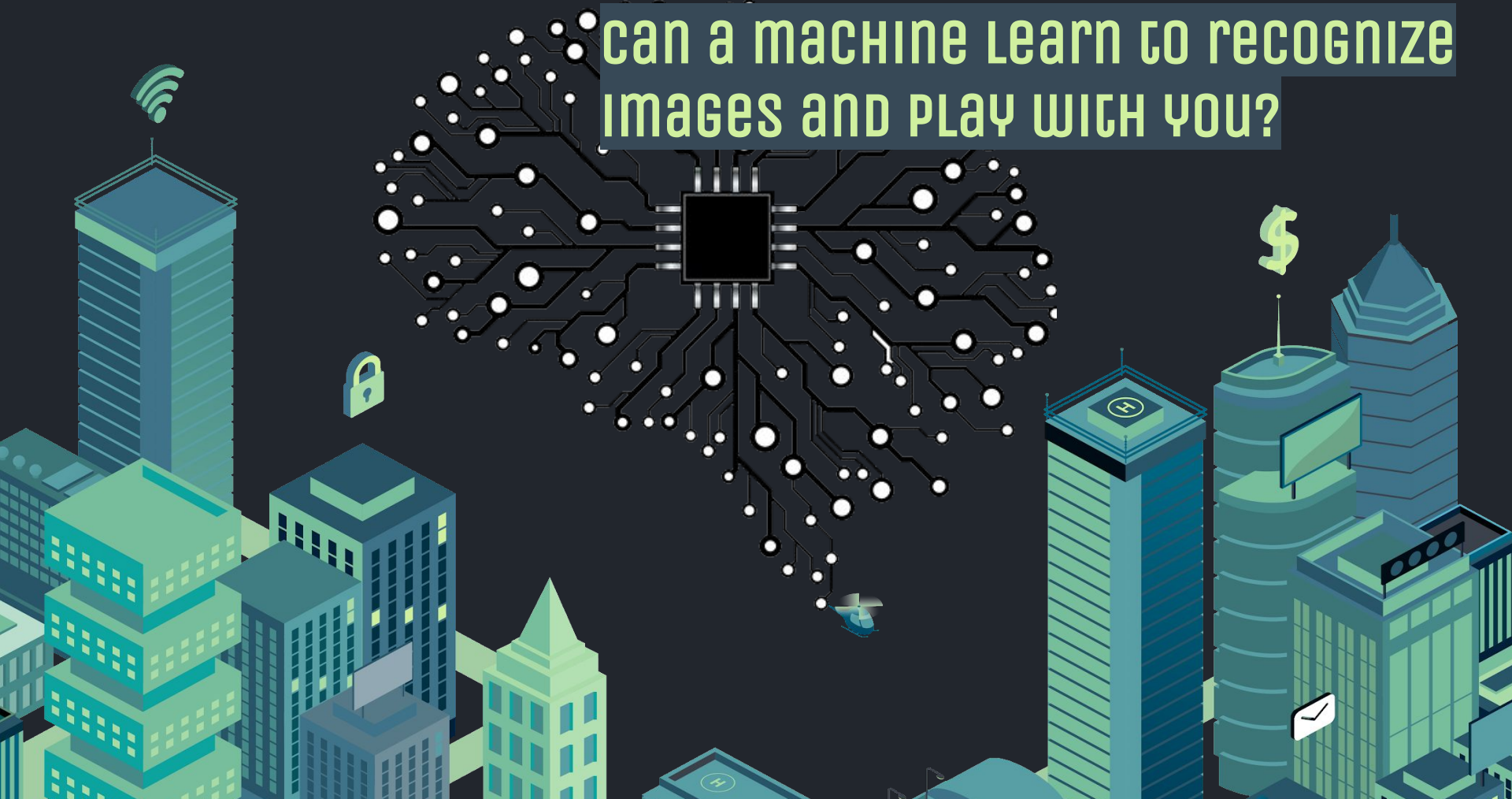


## School Program for Primary Education Students

Advanced Learning Activity  
Doukas School

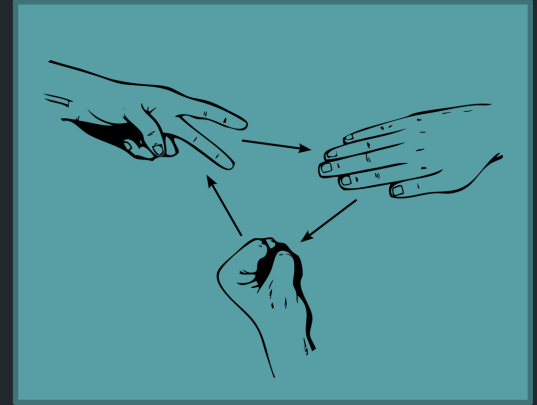
can a machine Learn to recognize  
images and play with you?



# ROCK PAPER SCISSORS

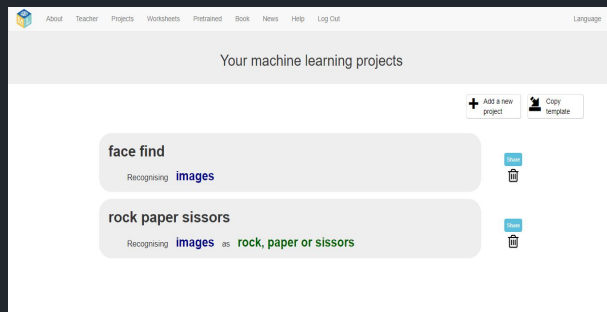


a1



# create a project

a2-  
3



**First time here?**

[Why register?](#)

**Already registered?**

[Forgot your details?](#)

---

**Try without registering**

**Sign up**

**Log in**

**Try it now**

**Start a new machine learning project**

☐ Whole-class project?

Project Name \*

rock paper scissors

Recognising \*

images

What type of thing do you want to teach the computer to recognise?

For words, sentences or paragraphs, choose "text"

For photos, diagrams and pictures, choose "images"

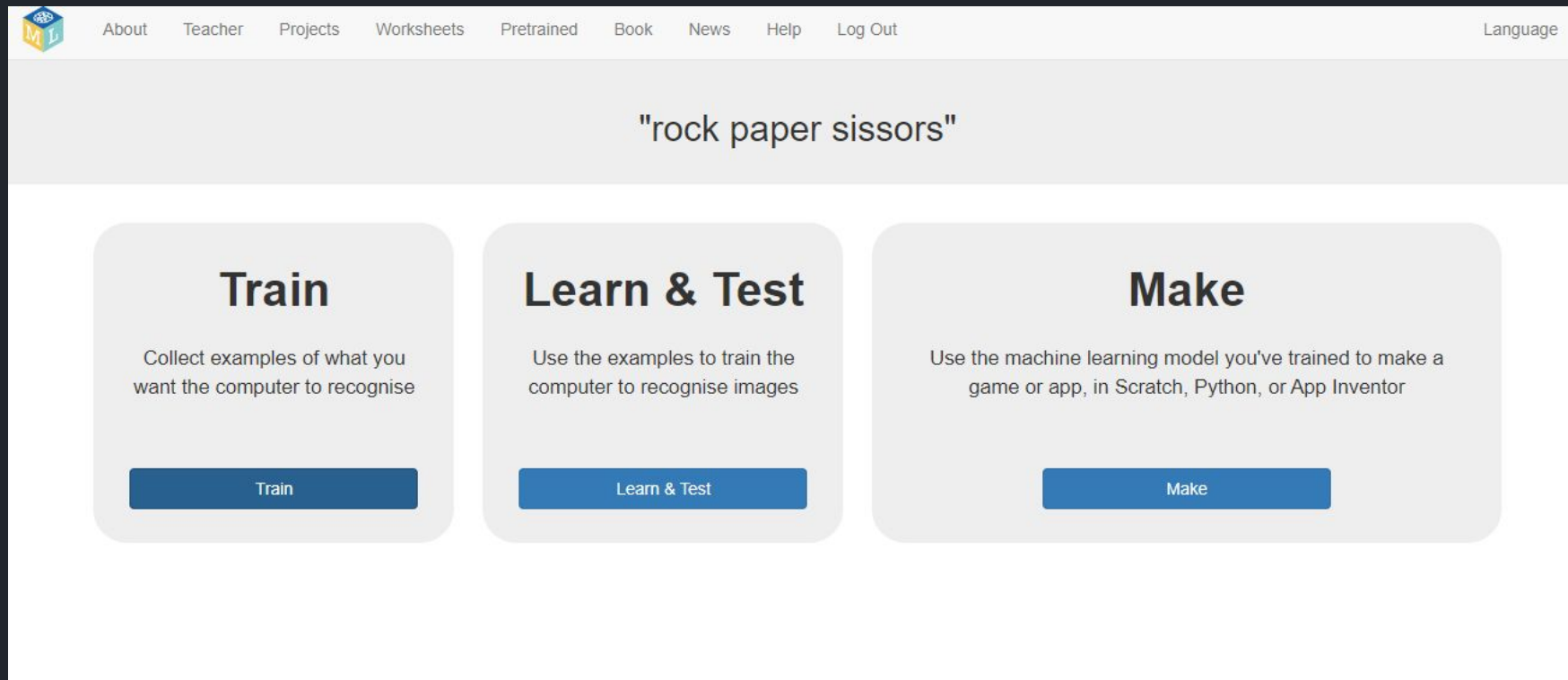
For sets of numbers or multiple choices, choose "numbers"

For voices and sounds, choose "sounds"

**CREATE** **CANCEL**

## 3 STEPS OF OUR PROJECT

a4



The screenshot shows a web interface for a machine learning project. At the top, there is a navigation bar with a logo on the left and links for 'About', 'Teacher', 'Projects', 'Worksheets', 'Pretrained', 'Book', 'News', 'Help', and 'Log Out' in the center. On the right side of the navigation bar is a 'Language' dropdown menu. Below the navigation bar, the project title '"rock paper sissors"' is displayed in a large, light gray box. Underneath the title, there are three main steps, each in a light gray rounded rectangle:

- Train**: Collect examples of what you want the computer to recognise. A blue button labeled 'Train' is at the bottom.
- Learn & Test**: Use the examples to train the computer to recognise images. A blue button labeled 'Learn & Test' is at the bottom.
- Make**: Use the machine learning model you've trained to make a game or app, in Scratch, Python, or App Inventor. A blue button labeled 'Make' is at the bottom.

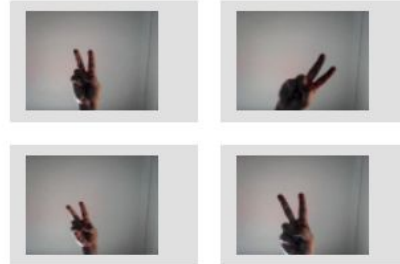
## create examples

Recognising **images** as **rock, paper or sissors**[Back to project](#)[+ Add new label](#)**rock**[www](#) [webcam](#) [draw](#)

20

**paper**[www](#) [webcam](#) [draw](#)

20

**sissons**[www](#) [webcam](#) [draw](#)

20

# Train our model

## What have you done?

You have trained a machine learning model to recognise when images are rock, paper or scissors.

You created the model on Tuesday, April 5, 2022 11:13 AM.

You have collected:

- 20 examples of rock,
- 20 examples of paper,
- 20 examples of scissors

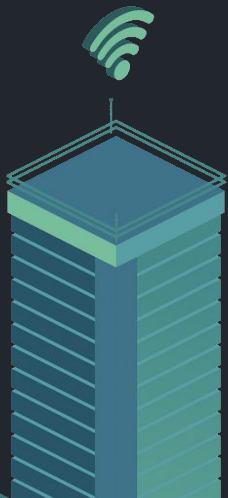
## What's next?

Try testing the machine learning model below. Enter an example image below, that you didn't include in the examples you used to train it. It will tell you what it recognises it as, and how confident it is in that.

If the computer seems to have learned to recognise things correctly, then you can go to Scratch and use what the computer has learned to make a game!

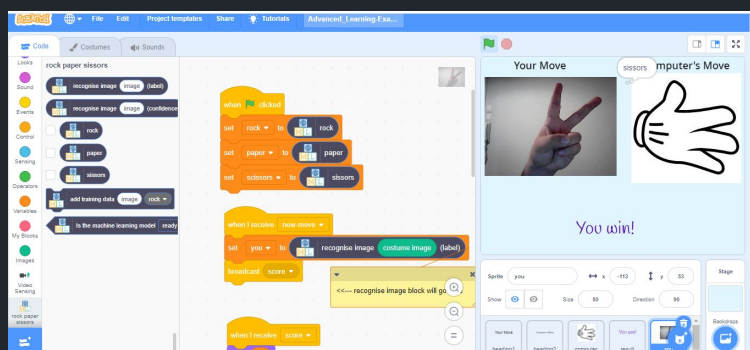
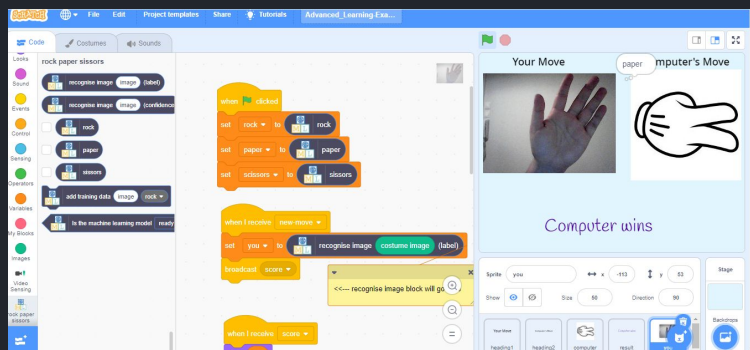
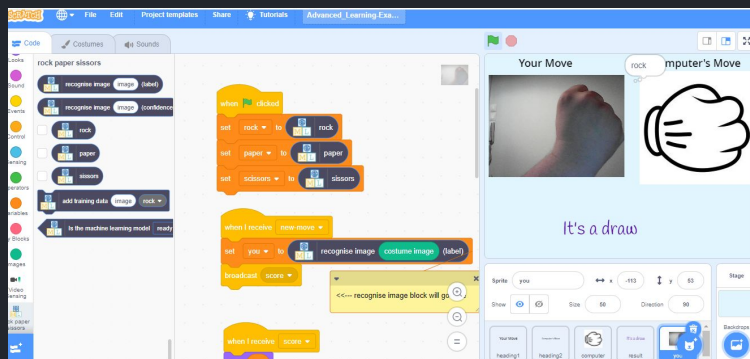
If the computer is getting too many things wrong, you might want to go back to the [Train](#) page and collect some more examples

Once you've done that, click on the button below to train a new machine learning model and see what difference the extra examples will make!



PLAY

a7



# Think about...

a8

- ❖ Which photos did the machine recognize?
- ❖ Which photos the machine did not recognize?
- ❖ Why some photos had not been recognized?
- ❖ How does the machine recognize the photos?

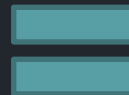
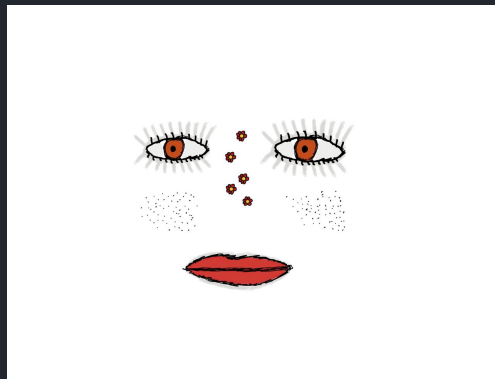


some ideas

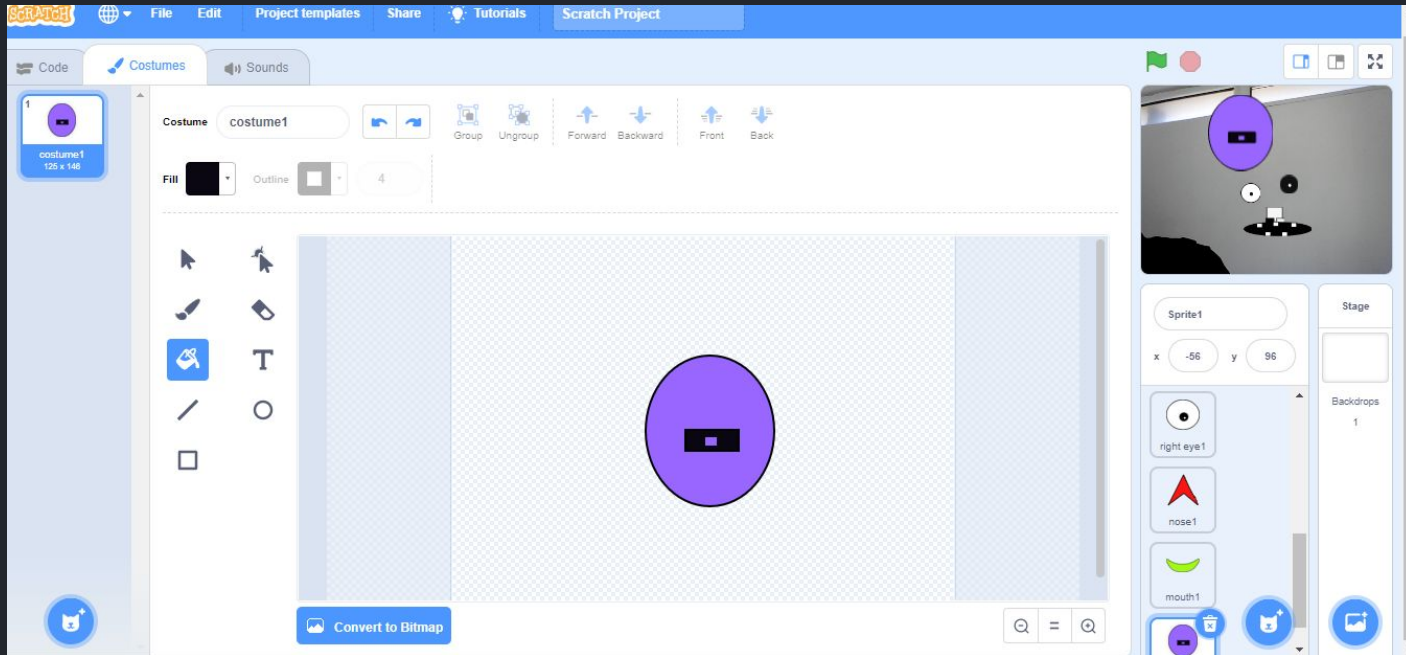
b1



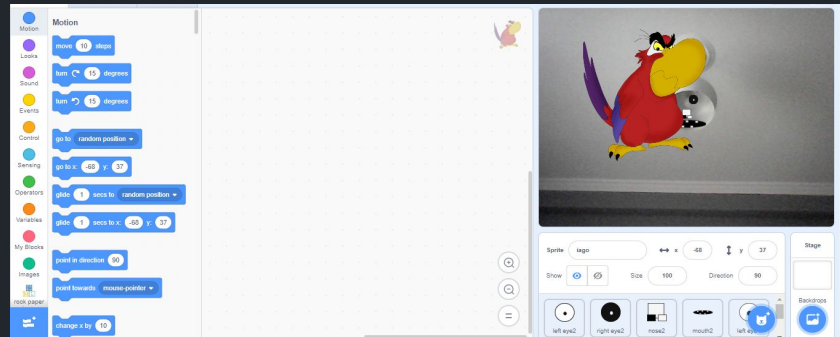
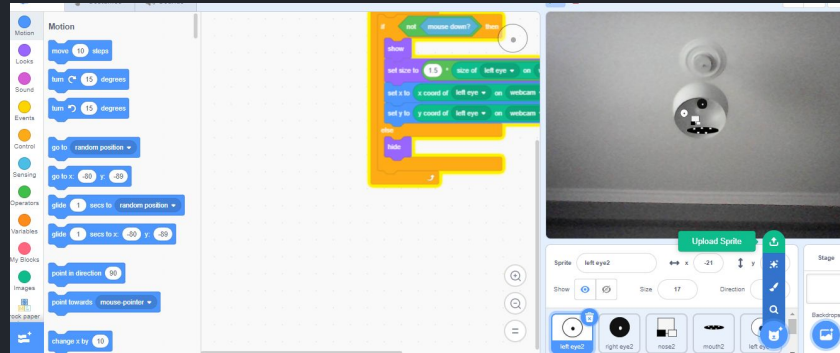
# DRAW YOUR FACE



# create data (sprite)

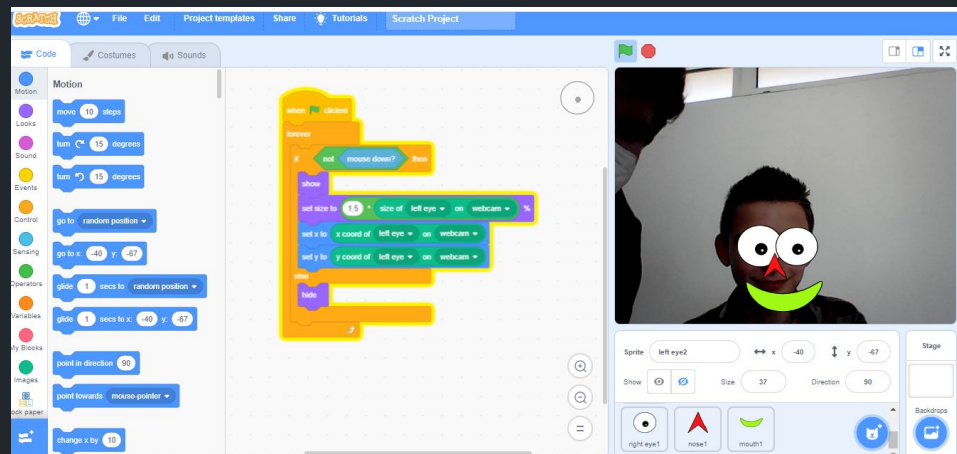
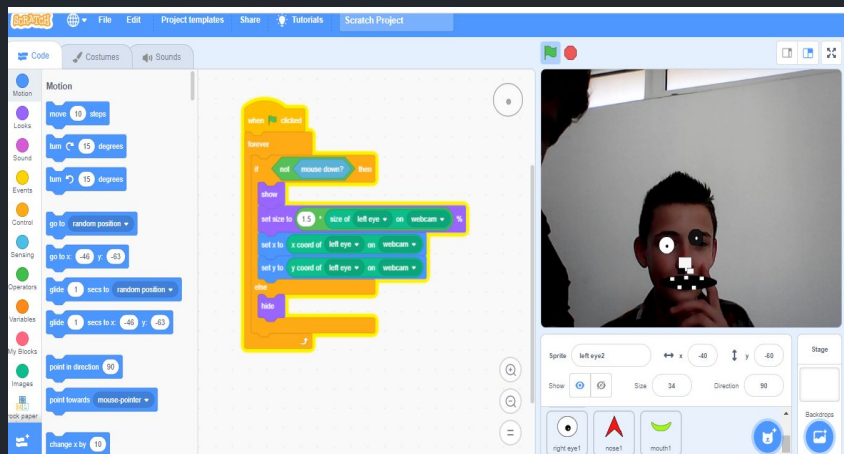


# Load a Sprite



# THE RESULTS IN THE PROGRAM

b5



[https://machinelearningforkids.co.uk/scratch3\\_and](https://machinelearningforkids.co.uk/scratch3_and)


# Think about...

b6

❖ How the filters moved when you moved?

❖ Did the features you created moved on the exact spot of the real facial feature? Why?



An isometric illustration of a city skyline with various buildings in shades of blue and teal. A tall building on the left has a Wi-Fi symbol on its roof. A padlock icon floats near a building in the center-left. A helicopter is flying in the middle of the scene. On the right, a building has a dollar sign on its roof, and another building has an envelope icon. The background is a dark blue gradient.

Video Production: George Tsigkos  
Narrator (student): Christofer Chiras