Generation AI

IO3 – School Program for Primary Education Students

Challenge Tutorial Template

Each partner will develop two games (1 per lesson plan) for students to play at the end of the lesson, related also to the topic. Or, they can also create an activity that involves an AI tool and make the students create the game by giving them a tutorial. This template responds to the tutorial game.

Challenge Tutorial Template

Use this template to design and develop the tutorial of the challenge through a Game-Based Learning (GBL) approach.

Name	What topping would you like on your pizza?
Tool	For this activity, we will use two different platforms: • Machine Learning for Kids (https://machinelearningforkids.co.uk/): it is an educational tool about machine learning that teaches children how to train a computer to recognize different elements like pictures numbers and text. Scratch (https://scratch.mit.edu/): it is a programming language educational tool that allows children to create stories, games, and animations to share with others around the world.
Aim	The aim of this activity is to have our digital character recognize what topping we would like on our pizza.

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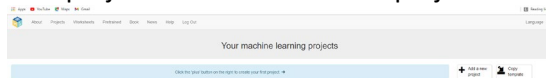|	
Description	By the end of this challenge the digital character will be able to recognize different pizza toppings from one another.
Step-by-step	The first thing to do is visit https://machinelearningforkids.co.uk/#!/welcome and press "Get started" You can then choose to create and account or you can choose "try without registering" Once you've done that its time to create a new project. Press "+Add a new project" You must then give your project a name, and decide on what we want the machine to recognize. The options are text, images, numbers, or sounds. For this activity, we will be using images. Once that's done click "create"
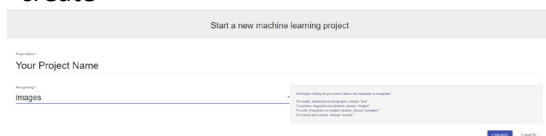
Once you've created your project, the tool will offer 3 different options: Train, Learn & Test and Make.

Let's start by selecting the option "Train"
This is where we will train the computer to recognize different types of pizza toppings.

Each pizza topping is going to be defined as a different label. The aim is for our character to recognize the pizza topping based on images we upload to these labels.
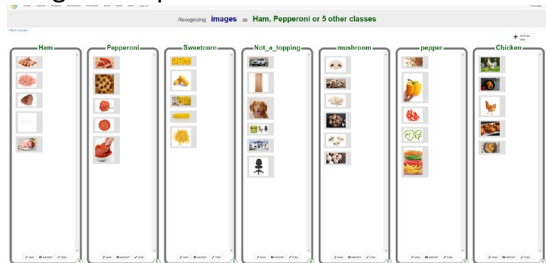
For this activity, we will create 7 labels.
- Ham
- Sweetcorn
- Mushroom
- Pepperoni
- Chicken
- Pepper
- Not a topping

Once all the labels are created, we must include different images of each topping. This way, our character will be able to recognize the toppings in our Scratch game.
Once you've finished that press " Back to project" in the top left corner.

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Now select "Learn and Test"

Here you can test to see if your images are working. Press the "train new machine learning model" button. This is so the machine starts associating images with the correct label.

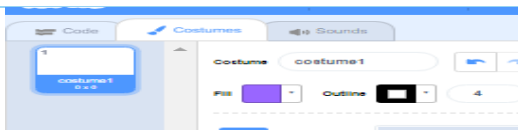Once you are happy with that, return to the project and select the last and final option "Make".

This option of the platform offers 3 different tools. We will use Scratch 3.0. to create our game which will use the machine learning model we just created.
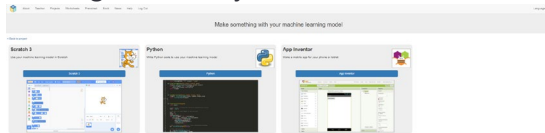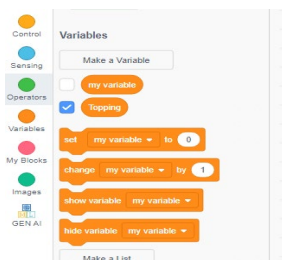

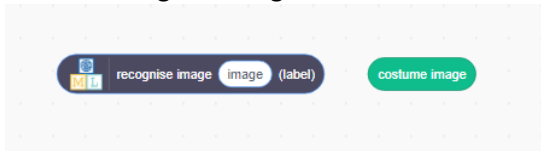Once scratch has opened go to the bottom right and select paint
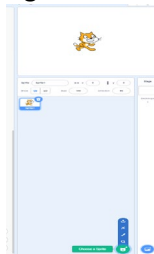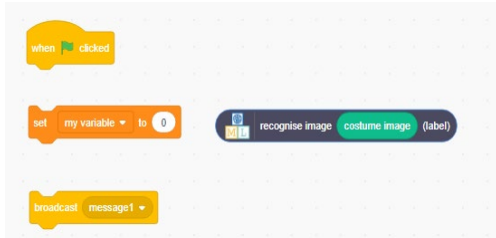

When that opens then click on the code window.

Then select variable from the side menu and select create variable.

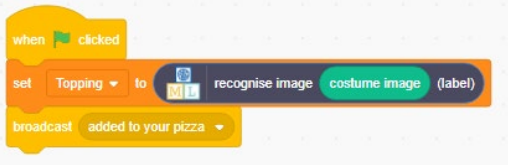Call this variable "Topping".

Its then time to write our code.

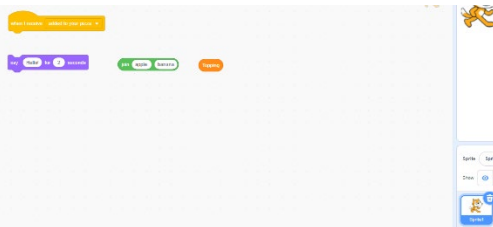Start by choosing the costume image block and the recognize image label block.
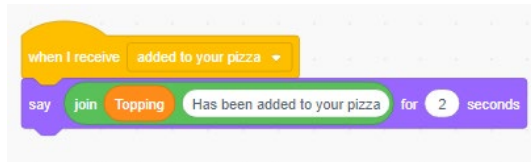
Then we should add the following blocks

Then for the code to run properly, we must put them together and change some names in the blocks. It should look like the below.

Its then time to return to sprite1 and write the code for it. You will need the following blocks.
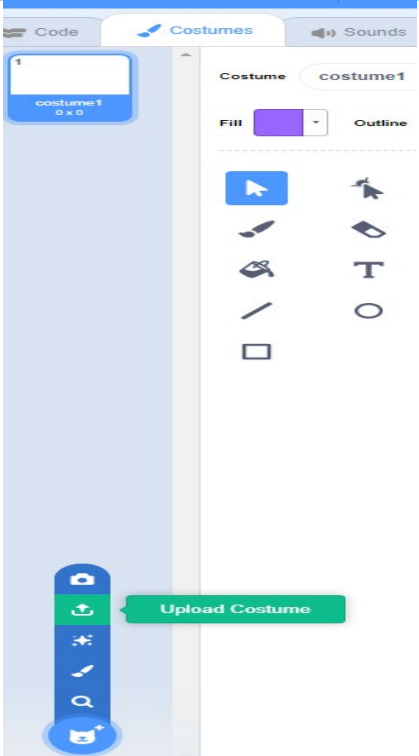

We then must put the blocks together and change some text. It should look like the below.

Perfect that's all the code we needed. Now let's check to see does it work.

Click back to Sprite2 and click on the costume tab, then select upload costume from the menu.

Here we can upload images of what pizza topping we would like on our pizza. For example, I would like sweetcorn so I'm going to upload an image of sweetcorn. Once the image is uploaded click on the flag and check does our character recognize the image and adds the topping to your pizza.

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