

## 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.

<b>Name</b>	Pizza Recommender
<b>Tool</b>	<p>For this activity, we will use two different platforms:</p> <ul style="list-style-type: none"> <li>Machine Learning for Kids (<a href="https://machinelearningforkids.co.uk/">https://machinelearningforkids.co.uk/</a>): 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.</li> </ul> <p>Scratch (<a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>): it is a programming language educational tool that allows children to create stories, games, and animations to share with others around the world.</p>
<b>Aim</b>	<p>Have you ever gone to order a pizza but can't decide what one you would like? The aim of this activity is that the waiter will be able to offer you a pizza based on the toppings you like.</p>

## Description

By entering in what toppings, you prefer the machine learning system will recommend a type of pizza for you.

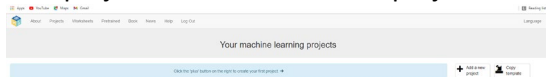
## Step-by-step

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 text. 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 of all the different types of pizza the restaurant offers. The aim is for the waiter to recommend a pizza based on the toppings he receives from the user.

For this activity we will create 6 labels (types of pizza)

- Meat Feast
- Hawaiiin
- Texas BBQ
- Hot and Spicy
- Pepperoni
- Margarita

Once you have created all the labels it's time to add what each pizza consists of. Click on "+ Add Example" and add what toppings would be on each pizza , here is one for an

example.



Its important to populate your label with as much information as possible to get the correct results.

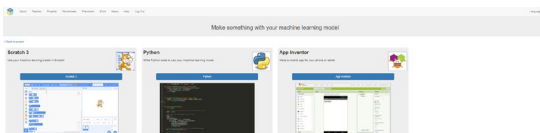
Once you've finished all the labels press "Back to project" in the top left corner.

Then select "Learn and Test"

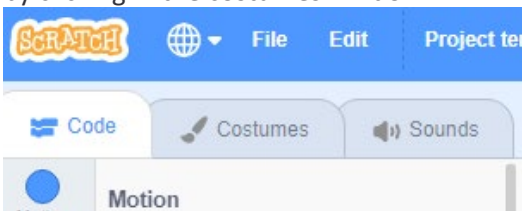
Here we can test to see if the machine is learning correctly. Click "Train new machine learning model" when that is finished try putting in some text to see how it is recognized based on your training.

Once you are happy with the results of the machine learning, 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.

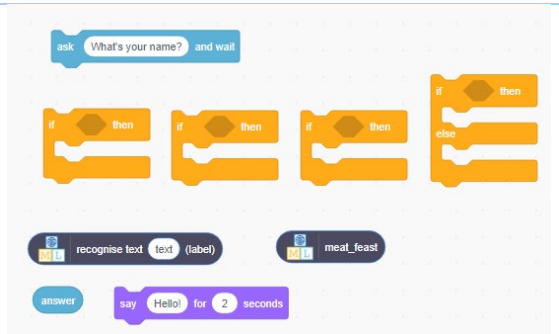


Once scratch has opened , you will see a character , this is known as Sprite1. You can change the character to whatever you want by clicking in the costumes window.

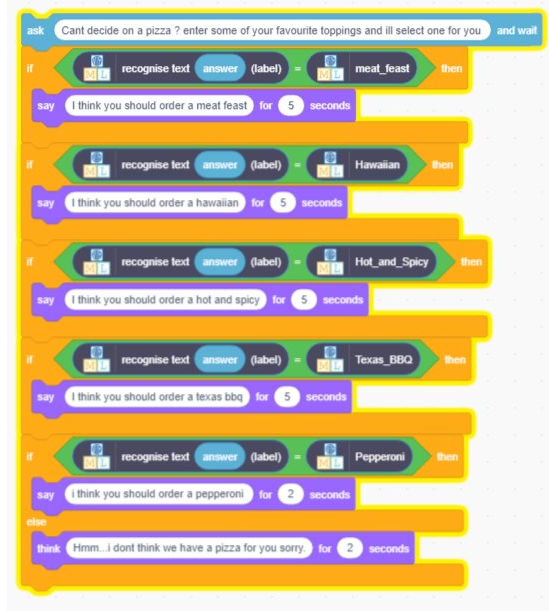


Once you have chosen your preferred costume, go back to the Code window and we will begin writing code that assists your machine learning.

The following blocks are needed to write the code. Go ahead and find the following blocks we will then put them together.

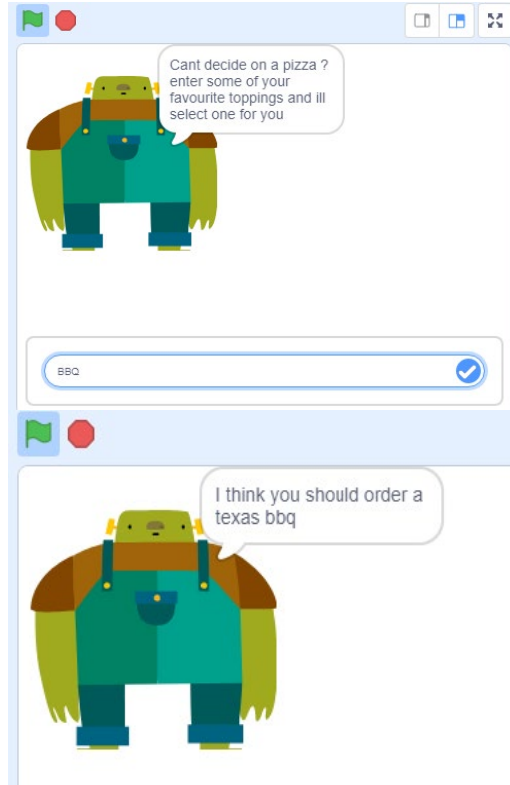


Now we will need to link all the blocks together and we will also need to change some text. Your code should look something like this.



Once that's finished lets see did it run correctly. Try typing in some toppings you

would like. For example, I chose BBQ



Perfect it worked. Why not try other toppings and see if you can get the waiter to recommend every pizza we have used in the machine learning.