Happy artificial intelligence

50-55 minutes | 6-8 years old | Difficulty: intermediate

In this activity we are going to play with emotions. First we work as a team on the expression of emotions and their recognition through a mime activity. Then we are going to colour and cut out faces with different moods, to later on play with an artificial intelligence that will ask us to show it the appropriate faces of an emotion in order to add points to our scoreboard.

Preparation

- Groups: small groups (3-5 people).
- Prepare the material needed for the activity.
- Charge the tablets before carrying out the activity.
- Install the *Barcode Scanner* application on all tablets from ***Google Play Store.***
- Have the downloadable document with QR codes printed and cut out.
- Have the downloadable document with emotion faces printed, if possible on cardboard.
- You can check the project **artificial intelligence** before starting the activity.

Materials

Sticky tape	Stationery.
Coloured pencils	Stationery.
Lolly pop sticks	Mini market supplies.
Scissors	Stationery.
Tablet	Android.
Pupil download	Document with emotion cards and QR code. One document per group.
Pupil download	Document with the faces. One document per group.

Follow these steps

Introduction 5 minutes

We start the activity by explaining that artificial intelligence can also be used to recognise emotions.

We establish teams and hand out the cards with the previously cut out emotions to each of them. Before starting to play, it is a good idea to introduce them to the emotions on the cards or give them some examples of situations that might cause them.

Artificial intelligence is the simulation of human intelligence processes by machines that allows these machines to perceive their environment, understand it, learn from it and act accordingly.

There are many types of artificial intelligence and they can specialise in different tasks, e.g. recognising emotions.

Play 15 minutes

Taking turns, each player takes a card and has to mime the emotion that comes up. The first person on the team to guess it scores a point.

Steps 15 minutes

Next, we hand out each team a downloadable document with faces showing different emotions, coloured pencils, scissors, wooden sticks and sticky tape.

We tell the groups that we are going to prepare the faces with the emotions so that an artificial intelligence can recognise them, just as they recognised the emotion of their classmates.

To do this, we ask them to colour in the faces, bearing in mind that:

- They cannot use the colour black.
- They cannot draw lines on faces.

Failure to follow any of these rules may result in the artificial intelligence not working properly.

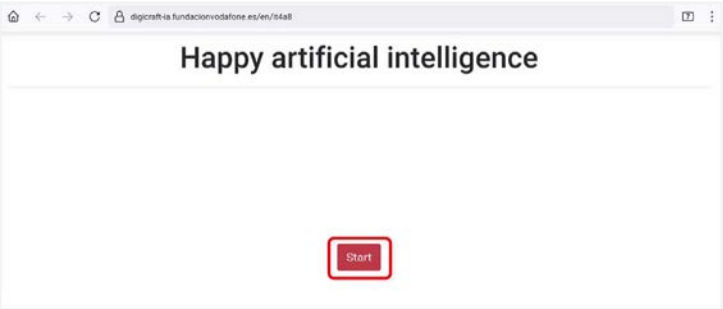
Finally, they must cut out the faces with scissors along the outer line and tape the wooden stick to the back.

Game 20 minutes

We hand out the tablets and the QR codes and, once we have all the faces assembled, we ask them to scan the QR code using the *Barcode Scanner* app to access the **game.**

We also ask them to place the tablet at an angle with the cover on the table.

We tell them to press the *Start* button to start the game and explain how to play.

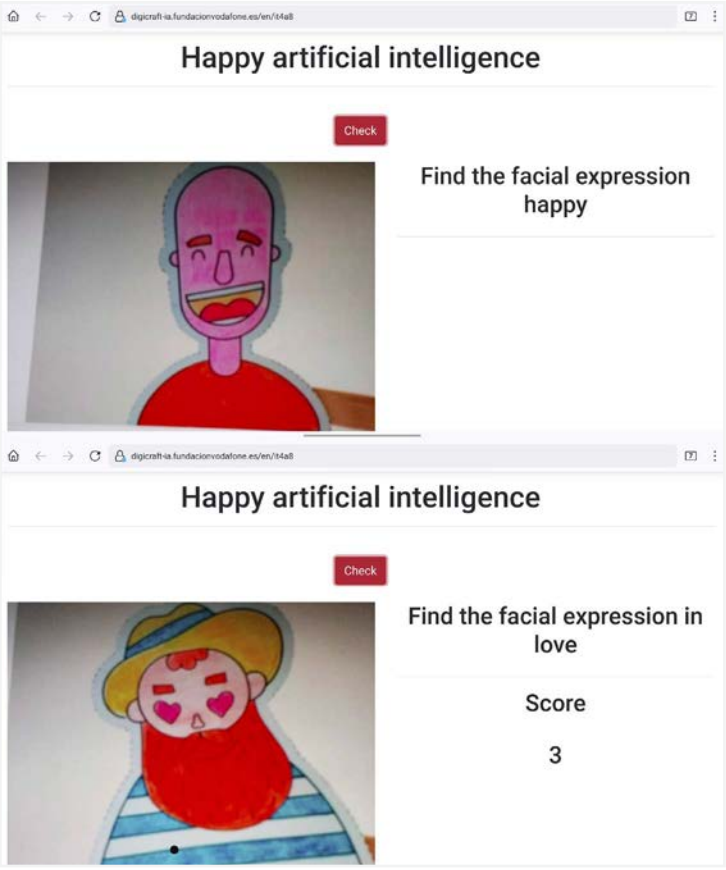


The app calls out the name of an emotion.

Then, one member of the team has to choose one of the faces and place it in front of the tablet's camera and press the *Check* button.

If it is correct, it adds a point to our score. Then, another person in the team repeats the above steps.

Finally, we ask all the teams to stop, and we write down each team's score on the board to see which team has the highest score.



Conclusion 5 minutes

We discuss with the class how they think artificial intelligence is able to detect whether the face is sad or happy. As an example, we can use some of the faces made by the class to compare them

The artificial intelligence behind the application is able to detect line patterns such as mouths and eyes while avoiding the colours around them. In order to make it work, we have trained it by showing it many pictures of similar faces. In addition, every time we play with it and show it new faces, the artificial intelligence learns a little more.

Objectives and competences

Objectives

- Know how to change some basic software and application functions.
- Be aware that they may be able to change the settings of the software they use.
- Know the basic characteristics of the devices and applications they use.
- Be able to choose and use digital tools that help in completing daily activities (for play, learning, etc.).
- Use technology to solve problems.
- Know of digital resources that allow them to develop their creativity.
- Use technology to develop their imagination (tell stories, create images, draw pictures, solve challenges, etc.).
- Actively participate in learning projects and activities, creatively using digital media.

Digital competences

Creating digital content

- Programming.

Problem solving

- Solving technical problems.
- Identifying needs and technological responses.
- Innovation and creative use of technology.

Other competences

- Ability to analyse and summarise.
- Oral and written communication.
- Problem resolution.
- Decision making.
- Working in a team.
- Interpersonal skills.

- Creativity.

- Critical reasoning.

Recommendations

- You can establish groups or allow the pupils to choose their team members.
- If there is more time available or pupils progress more quickly than expected:
  - They can spend more time colouring faces.
  - They can colour more faces in different ways.
- If there is less time available:
  - Colour the faces in one colour only.
  - Do not cut out the faces or put the wooden stick on them.