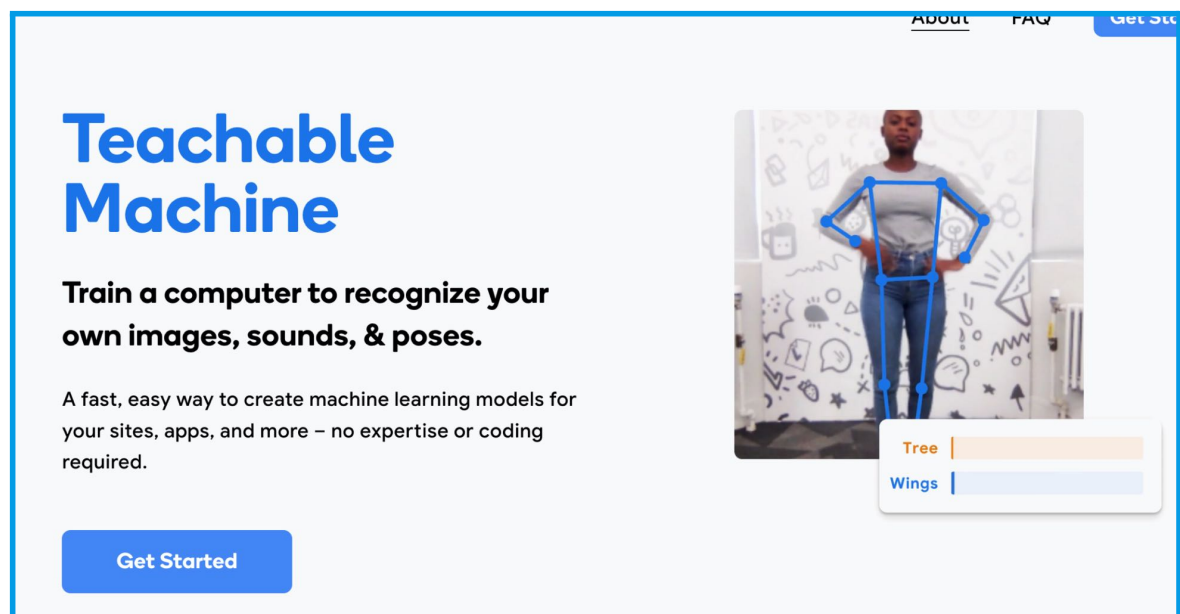


Activity 2.1.2 - Teachable machine with Google

Duration	90 minutes
Requirements	Having followed Activity 1 in Module 1
Hardware and Software tools used	<i>Required:</i> a computer and an Internet connection.



Procedure (steps)

Teachable machine is a web application to introduce AI and Machine Learning (ML) and can be used to understand how machines “learn” through a simple classification activity.

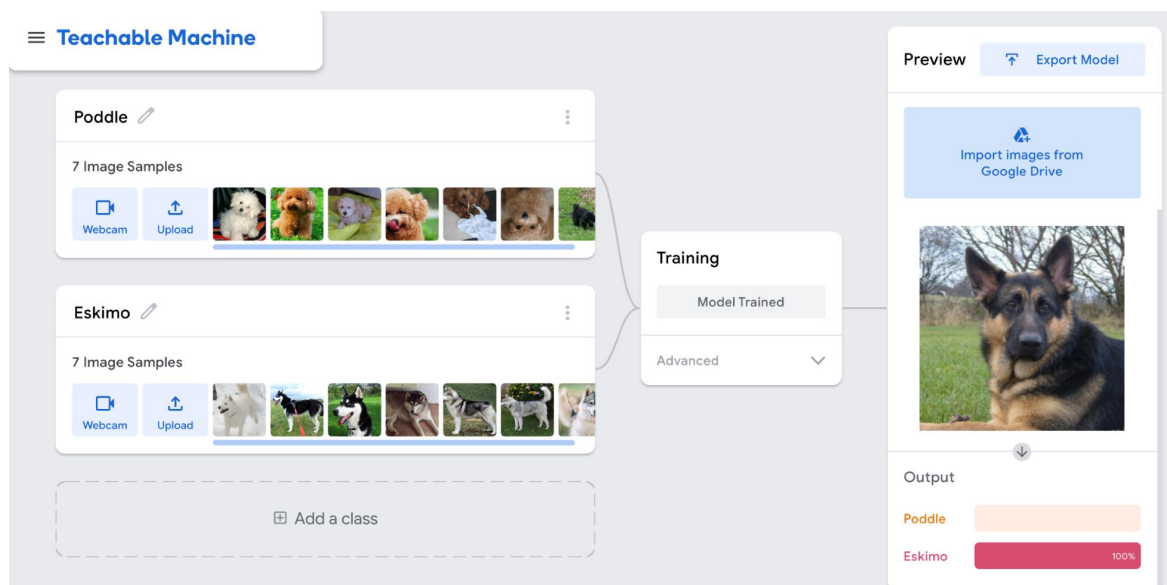
Anticipatory Set

1. Introduce students to teachable machine interface
2. It is possible also to view or use the demo material present in the tool (using for example the tutorial <https://teachablemachine.withgoogle.com/v1/>)

Direct Instruction & Guided Practice

- Assign images to classes
 - a. Give students the images from the dog breeds from the previous activity (see also resources)

- b. Access the teachable machine and create a new “Standard Image project”
 - c. Group can start with two or three groups, assigning a name for the groups and uploading the corresponding images to the different groups
- Training
 - a. The student can now train their model and testing with other images (from the same training set or from other dog breeds).
 - b. Students can now report on their results and make predictions on how the model they trained works .



Independent Practice

After this first activity that can be performed individually, the teacher can split the class into groups of 5-7 students. They can perform the same activity two or three times while the teacher moves between groups to make sure that students are doing right and to solve any problems/clarification questions.

Closing

This is the perfect opportunity to open up the class for a group discussion. Teachers can ask students questions that help them realize the importance of the activity with questions like, “how does the teachable machine work?”, “why is it called “teachable” machine?” “who is the teacher?” “how the results are influenced by the images we used for the training?”.

Troubleshooting

Possible issue	Possible solution
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The interface language for Teachable machine in english only	The activity can be performed in group and do not require to navigate the interface or read the text
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Resources for teachers

Below are some online resources that may be useful to facilitate the transmission of concepts by teachers during the proposed activity in the classroom:

- Latest version of the teachable machine <https://teachablemachine.withgoogle.com/>
- Previous version of the Teachable Machine with a tutorial <https://teachablemachine.withgoogle.com/v1/>

Presentation of Teachable Machine in BULGARIAN

<https://drive.google.com/file/d/1cB5K0Bbyo1pyi5wL6UVQcao0m4leEOXk/view?usp=sharing>