



Activity Guide

Activity 2:

Gender without Bias – Learning ML





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Glossary

AI(Artificial Intelligence)

CM(Classification model)

Train

Learn

Try



Introduction

In activity 1 we created a classification model that will help a startup hire a Computer Science expert, but this model was trained with gender bias and as a result the model classified more times to men how hired and the candidates women as Not hired.

In this activity we are going to create a new classification model with the same objective but in this case we train the model without gender bias. We added the same number of male and female pictures and in similar situations for both.

As a result, you can see how important is the type and amount of data that we use for creating an AI model for avoid any type of discrimination.

A step-by-step guide

Step 0 :

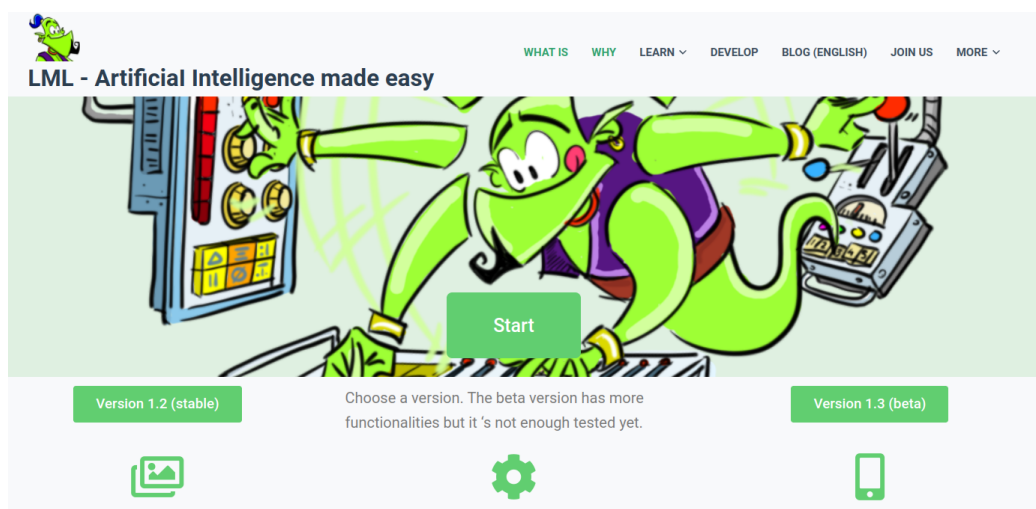
- a) Click here to visit the following website:
<https://fosteringai.github.io/project/result2/>
- b) Download this file: *source_activity2.zip* in your Desktop
- c) Unzip : *source_activity2.zip*

The file *source_activity2.zip* contains two files :

- activity2_gender_ub.json
- test_image.jpeg

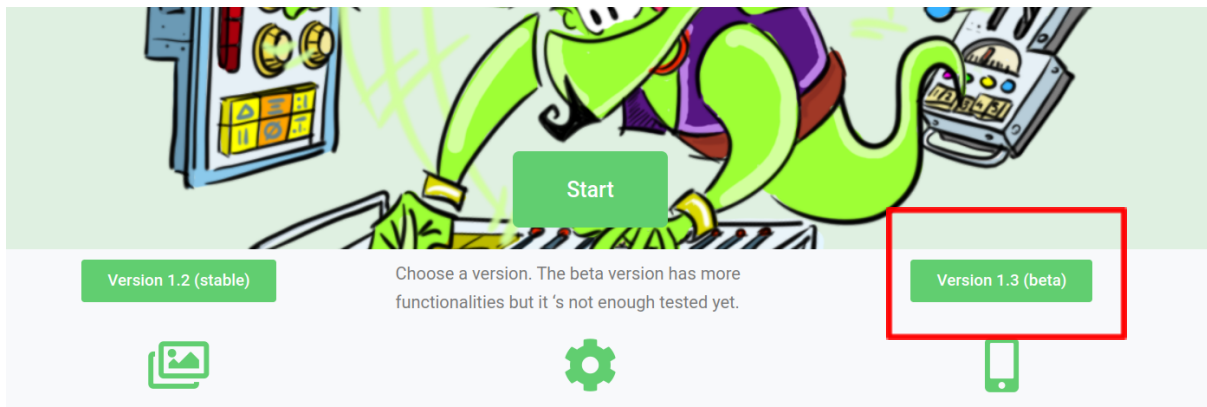
Step1:

- a) Click here to visit the following website:
<https://web.learningml.org/en/home-spanish-en-translation/>



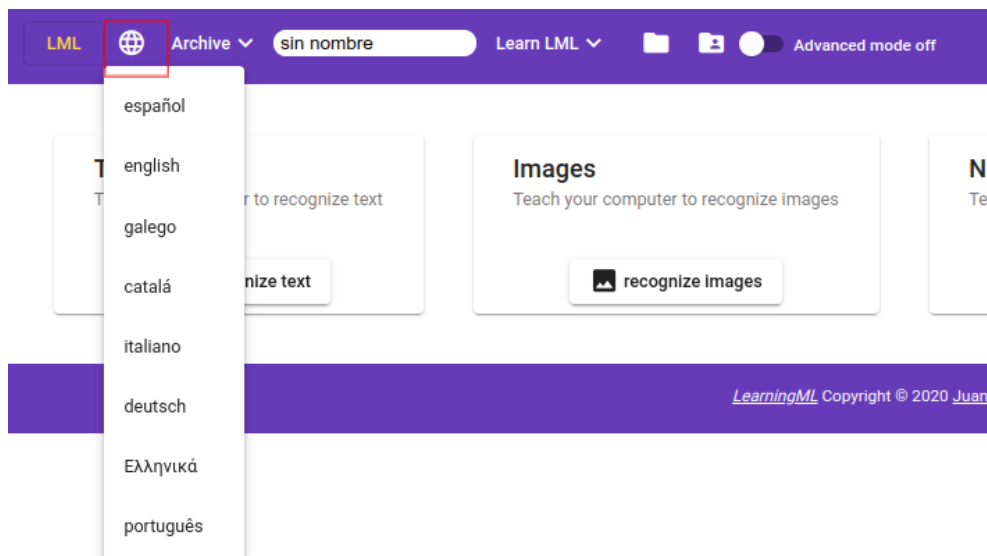
Step2:

a) Click on : version1.3



Step3:

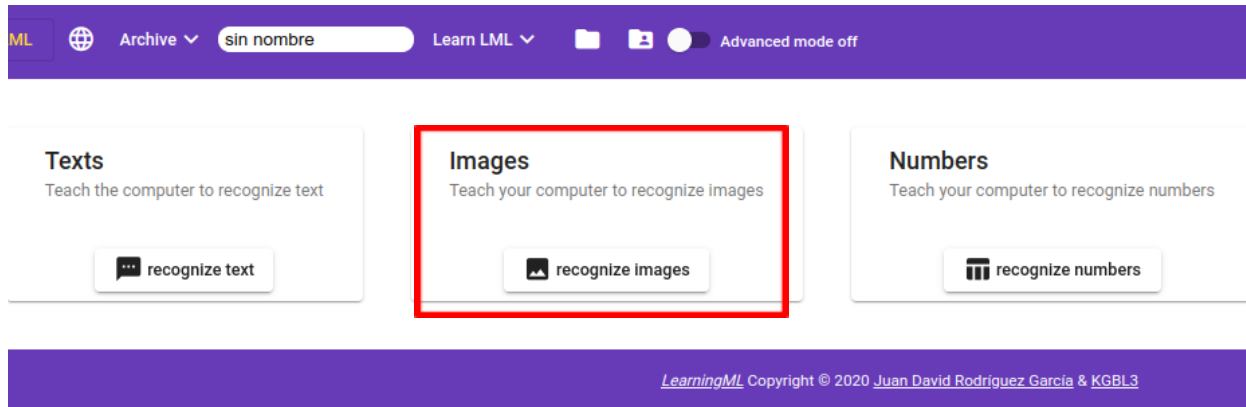
a) Select your language: click on the circle





Step 4:

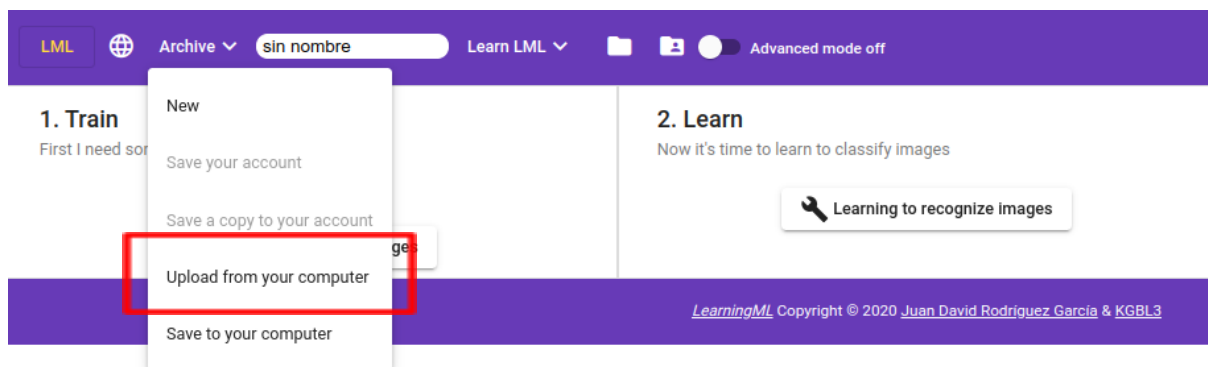
a) Click on : recognizer images



Step 5:

a) Upload file: activity1_gender_ub.json

Click on -> **Archive** -> **Upload from your computer**

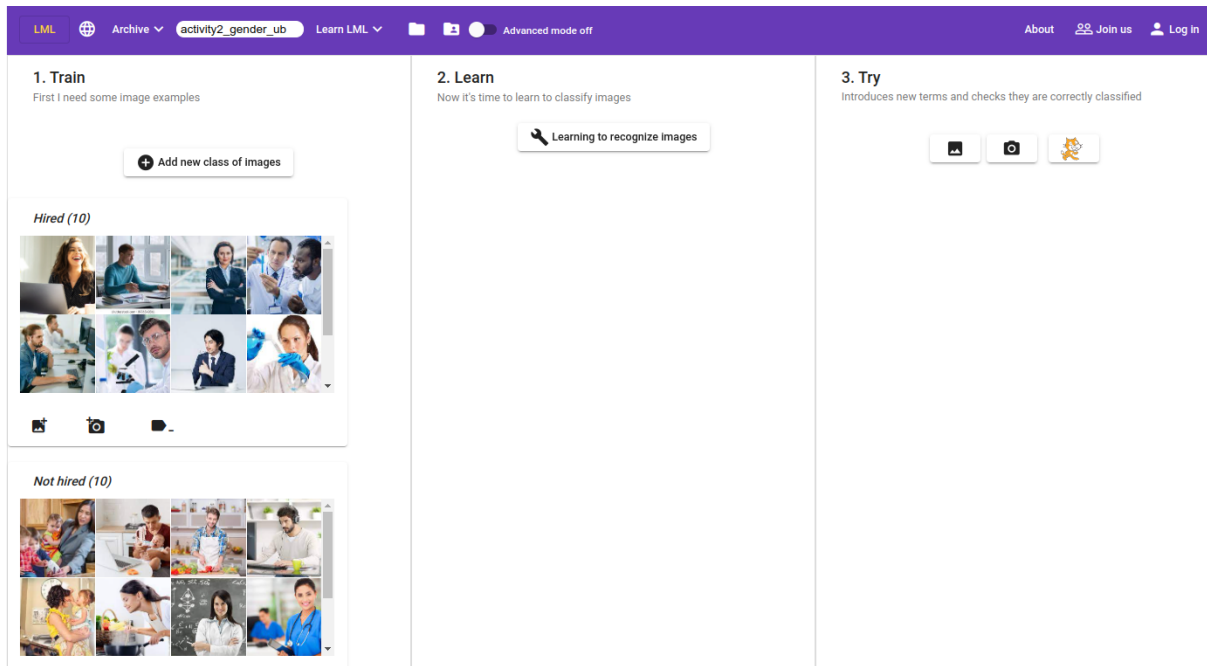


b) Select file **activity2_gender_ub.json** and upload

Desktop->source_activity2->activity2_gender_ub.json

Note:

As you can see in the following picture the two classes (Hire and Not hired) have been added with their respective images.



Learning MI have 3 stages: Train, Learn and Try

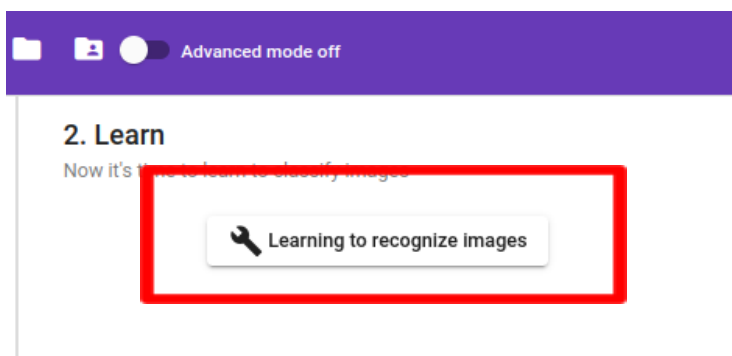
1. Train: This stage consists of adding the data that will be used to train the classification model. The classification model will use these images to learn similarity patterns between the images.

We have two categories for classifying a candidate : Hired and Not Hired

Each class needs 10 images, but we added images without gender bias in this example. We added the same number of images of both women and men in the same type of situations.

Step 6:

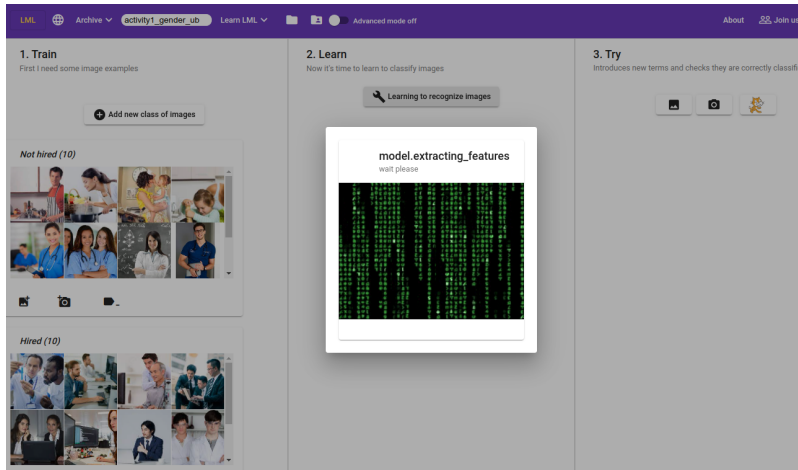
- a) Click on :learning to recognize images



Note:


The second stage in Learning ML is Learn:

1. Learn: In this stage, the classification model learns from the images we added in the previous step. The model learns the similarity patterns of the images and joins the things that are similar.



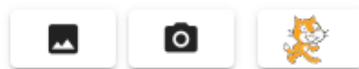
Step 7:

- a) Upload the test image:

Click on : Try -> icon 

3. Try

Introduces new terms and checks they are correctly classified



- a) Select the test image: test_image.jpeg
Desktop->source_activity2->test_image.jpeg

Note:

The last stage in Learning ML is Try:

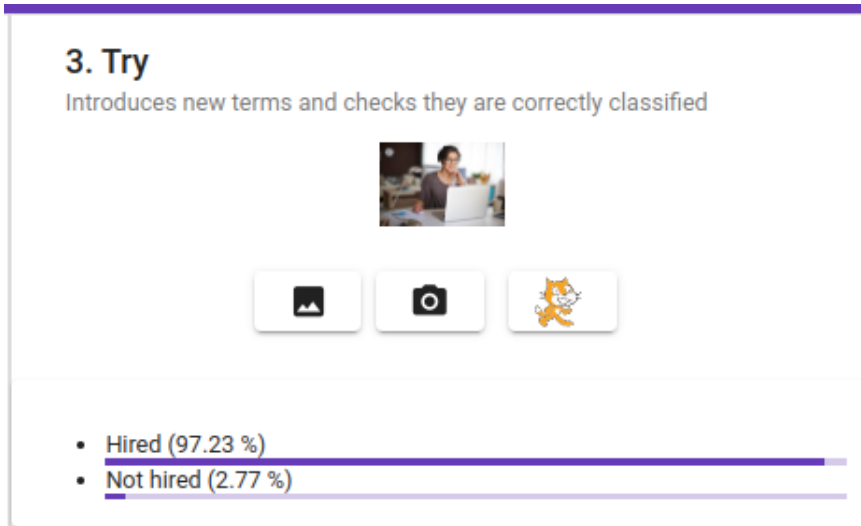
3. Try: In this stage the model is going to classify the candidate image as Hired or Not hired. The test image can't not be part of the data train stage.



Results

In this activity, in the *test_image* there is a developer woman.

As result, the model classifies a candidate as follows : **Hired**



Why these results?

How we have seen the model classified the female candidate as Hired, this is because was trained without gender bias. We added the same number of male and female pictures in similar circumstances, so the model will rank a candidate equally. The gender of that person is irrelevant to his or her eligibility for the position.