



Activity Guide

Activity 2: Gender without Bias - Learning ML



FAIaS: Fostering Artificial Intelligence at Schools 2020-1-ES01-KA201-083047 The material was created by CollectiveUP



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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 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/



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Step2:

a) Click on : version1.3



Step3:

a) Select your language: click on the circle

LML	Archive	 sin nombre 	Learn LML 🗸 📄	Advanced mode	off
	español				
1	english		Images		N
	galego	r to recognize text	Teach your computer	to recognize images	Te
	catalá	nize text	recogn	ize images	
	italiano				
	deutsch			<u>LearningML</u> Copyright © :	2020 <u>Juan</u>
	Ελληνικά				
	português				





Step 4:

a) Click on : recognizer images

ML	Learn LML 🗸 📄 🖪 🌍 Advanced mod	le off
Texts Teach the computer to recognize text	Images Teach your computer to recognize images	Numbers Teach your computer to recognize numbers
recognize text	recognize images	P 2020 Juan David Rodríguez García & KGBL3

Step 5:

a) Upload file: activity1_gender_ub.json

Click on ->Archive-> Upload from your computer

LML 🌐	Archive 🗸 sin nombre	Learn LML 🗸 📄 🖆 💭 Advanced mode off
1. Train First I need so	New Save your account	2. Learn Now it's time to learn to classify images
	Save a copy to your account	Learning to recognize images
	Upload from your computer	<i>LearningML</i> Copyright © 2020 Juan David Rodriguez Garcia & KGBL3
	Save to your computer	<u>Economytric Copy</u> ngin © 2020 <u>Suair David Rounguez Garcia</u> a <u>Rouco</u>

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.

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LML Archive activity2_gender_ub Learn LML	Advanced mode off	About 😤 Join us 💄 Log in
1. Train First I need some image examples	2. Learn Now it's time to learn to classify images	3. Try Introduces new terms and checks they are correctly classified
Add new class of Images		
≝ 10 ₽-		
Not hired (10)		

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





Collective

The second stage in Learning MI 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 r	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**

3. Try Introduces no	ew terms and checks they are correctly classified
 Hired (97 Not 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.