Documentation

Automated Facial Recognition Notebook

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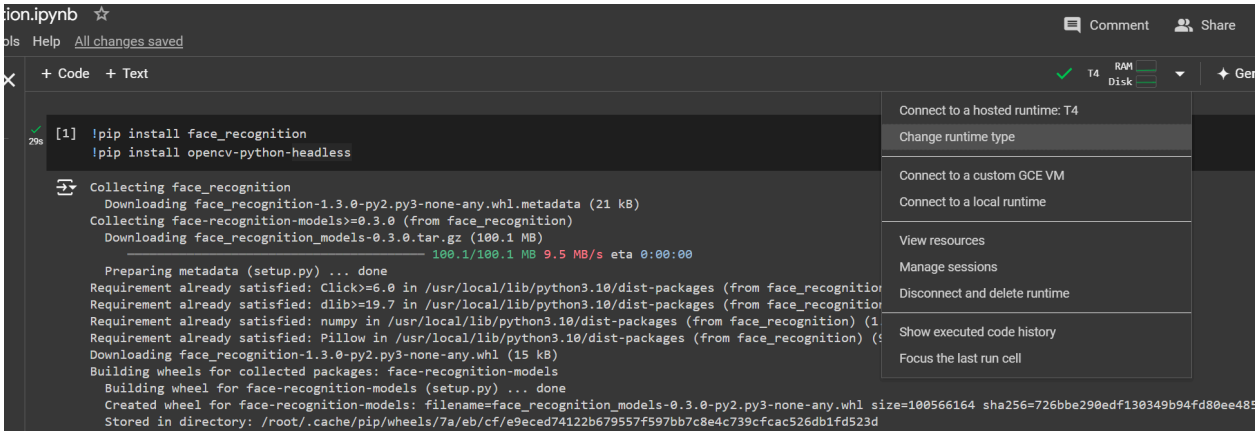
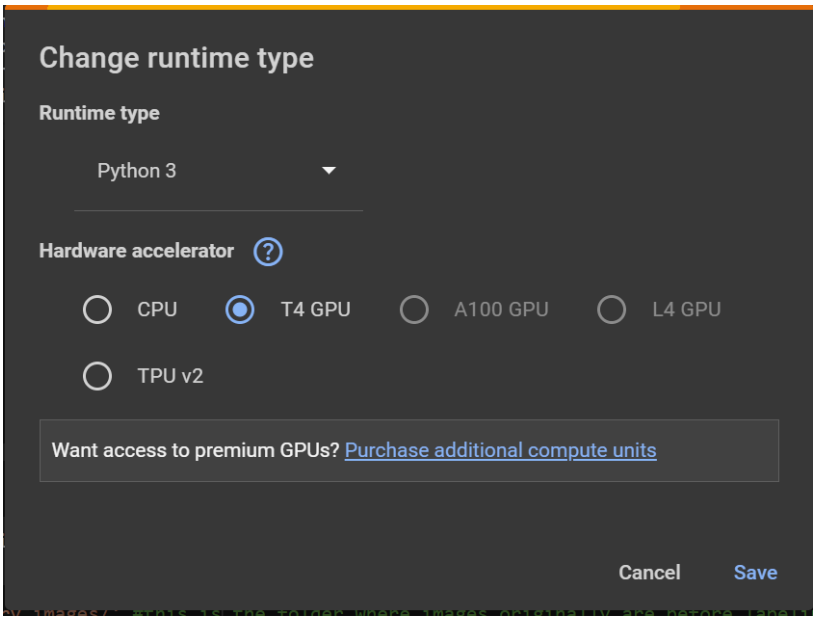
The following document serves as a tutorial for how to use the google collab notebook “Automated_Facial_Recognition”.

The first step is to create three folders anywhere in the drive that you are logged in on. One to contain all spreadsheets, one for all unlabelled photos and one for all labeled photos.

Next we must connect to Google collab’s GPU. To do this we must change the runtime on the top right to t4 gpu:

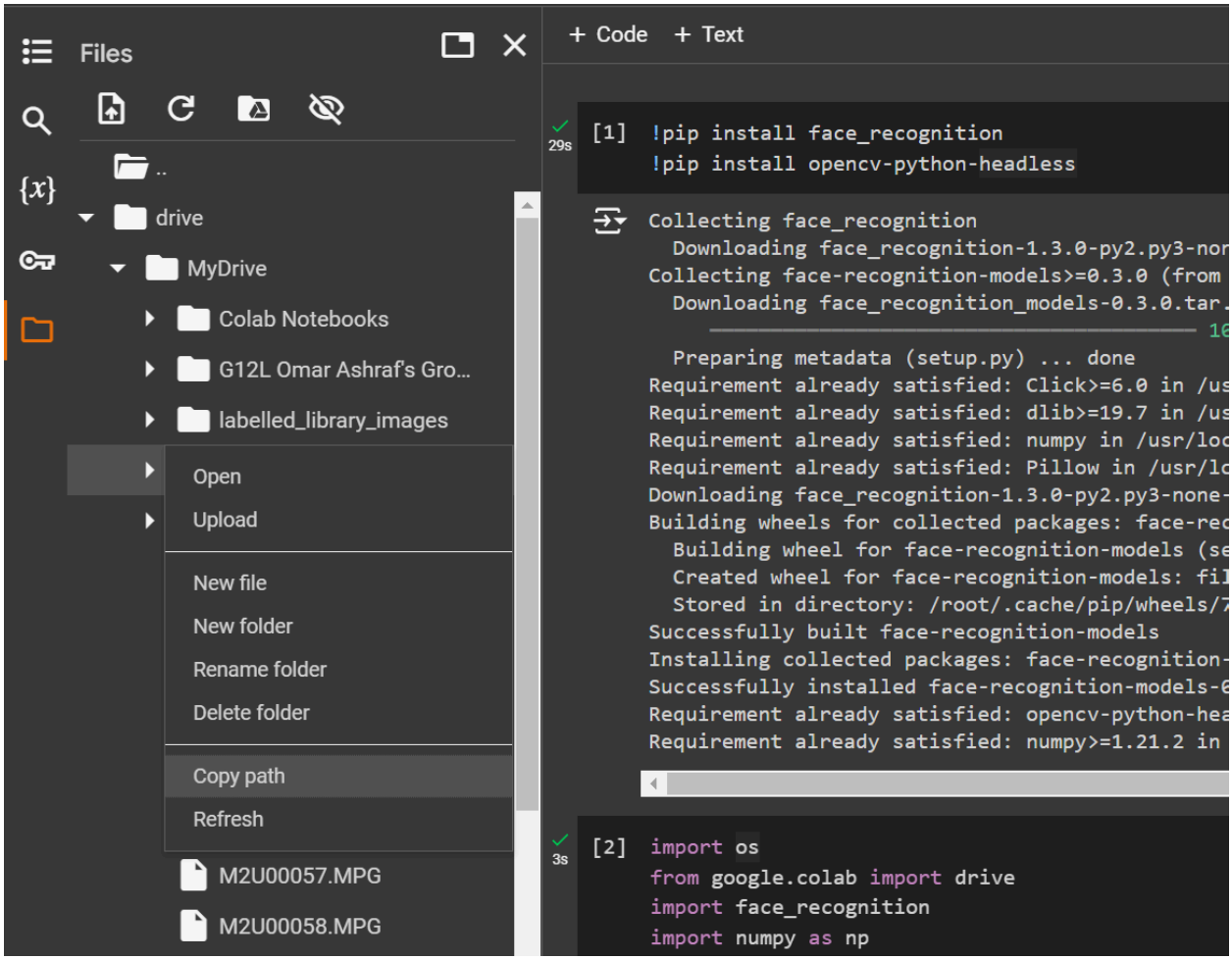




Next run the first three cells. (This will mount your drive so we can get the folder locations)

A prompt will show up to mount google drive accept and continue

Next, get their path by finding them on the panel on the left and copying their path as shown below:



Paste each path in the 4th cell:

```
unlabelled_folder = '/content/drive/MyDrive/unlabelled_library_images/' #this is the folder where images originally are before labeling
labelled_folder = '/content/drive/MyDrive/labelled_library_images/' #the images are moved here
spreadsheet_folder = '/content/drive/MyDrive/library_spreadsheets/' #any database files go here

#note you can edit and put whatever folders you want those are just the name of my folders^
```

If you have any already generated spreadsheets from the application (faces_data.csv and image_face_names.csv) you must make sure they are in the spreadsheets folder as not doing so will generate a new one.

Also note anything in the unlabeled folders WILL BE MOVED to the labeled folder in any case of running all cells.

Case: Labeling new images:

If you plan on labeling new images, you must:

First, place them all in the unlabelled folder in the google drive.

Next, create a csv file and name it new_data.csv (or use an old new_data.csv and edit the rows).

The structure of the csv file is as follows:

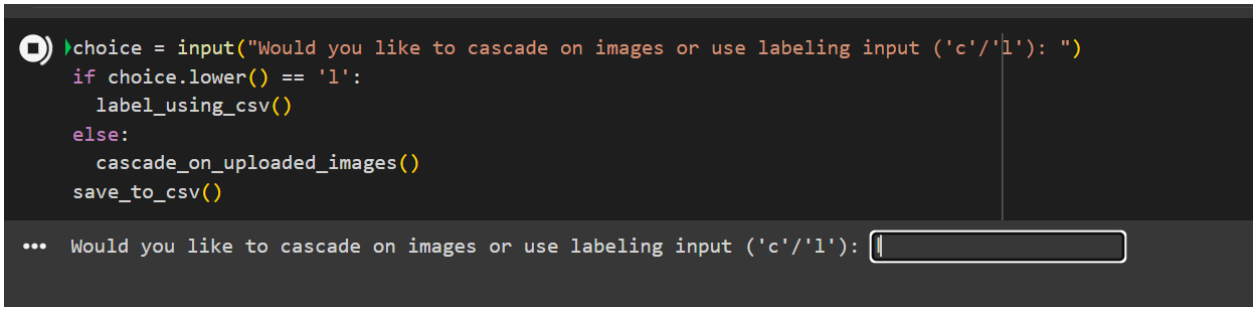
image_name	faces
ariana_michael_	[Ariana Grande, Michael B Jordan, Actress Girl]
britney_oprah_m	[Brittney Spears, Oprah Wimfrey, Matthew Perry
keanu_matthew.j	[Keanu Reeves, Matthew Perry]
rhianna.jpg	[Rhianna]

Note the faces are in brackets with quotes around them and the image name must exactly match the image. This is showed clearly below:

```
image_name,faces
ariana_michael_girlidk.webp,"[Ariana Grande, Michael B Jordan, Actress Girl]"
britney_oprah_mathew.jpg,"[Brittney Spears, Oprah Wimfrey, Matthew Perry]"
keanu_matthew.jpg.jpg,"[Keanu Reeves, Matthew Perry]"
rhianna.jpg,"[Rhianna]"
```

Then, run all cells.

In the second to last cell input ‘l’. As shown below then press enter::



Case: Cascading:

If you plan on using already created encodings to label images (ie the faces already exist in the database). Then you must:

First, place them all in the unlabelled folder in the google drive.

Then, run all cells.

In the second to last cell input ‘c’. As shown below then press enter:

Note in all cases the final cell can be run to print all labeled images with a box around the faces and the name.

Extra note there may be some limitations as this is a fully automated version. Feel free to contact us if any problems occur.

Enjoy!