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DL lab03

6. Upload an image of yourself *or* another individual to the images directory and encode and add it to the database mentioned in the notebook.

These are the new images

derik.jpg

camrera_6.jpg

```
[46] database = {}
     database["danielle"] = img_to_encoding("images/danielle.png", FRmodel)
     database["younes"] = img_to_encoding("images/younes.jpg", FRmodel)
     database["tian"] = img_to_encoding("images/tian.jpg", FRmodel)
     database["andrew"] = img_to_encoding("images/andrew.jpg", FRmodel)
     database["kian"] = img_to_encoding("images/kian.jpg", FRmodel)
     database["dan"] = img_to_encoding("images/dan.jpg", FRmodel)
     database["sebastiano"] = img_to_encoding("images/sebastiano.jpg", FRmodel)
     database["bertrand"] = img_to_encoding("images/bertrand.jpg", FRmodel)
     database["kevin"] = img_to_encoding("images/kevin.jpg", FRmodel)
     database["felix"] = img_to_encoding("images/felix.jpg", FRmodel)
     database["benoit"] = img_to_encoding("images/benoit.jpg", FRmodel)
     database["arnaud"] = img_to_encoding("images/arnaud.jpg", FRmodel)
     database["derik"] = img_to_encoding("images/derik.jpg", FRmodel)
```

7. Instead of the image of Younes, use another image of the same individual you chose in step 6 to do *both* face verification and face recognition.

```
verify("images/camera_6.jpg", "derik", database, FRmodel)

It's derik, welcome home!
(np.float32(0.0), True)
```

Double-click (or enter) to edit

Expected Output:

It's younes, welcome home! (0.65939283, True)

Benoit, who broke the aquarium last weekend, has been banned from the house and removed from the database. He stole Kian's ID card and came back to the house to try to present himself as Kian. The front-door camera took a picture of Benoit ("images/camera_2.jpg). Let's run the verification algorithm to check if benoit can enter.

```
[49] verify("images/camera_6.jpg", "kian", database, FRmodel)

It's not kian, please go away
(np.float32(0.94143385), False)
```

face verification

```
[51] output = who_is_it("images/camera_6.jpg", database, FRmodel)

it's derik, the distance is 0.0
```

face recognition

8. Add the two new images and screenshots of outputs from *both* face verification and face recognition of step 7 to a word file.

```
[52] #dictionary contains the L2 distance between target image encoding and database embeddings of other images
     output[2]

{'danielle': np.float32(1.2450246),
 'younes': np.float32(0.8511222),
 'tian': np.float32(1.0769497),
 'andrew': np.float32(1.0837747),
 'kian': np.float32(0.94143385),
 'dan': np.float32(0.951806),
 'sebastiano': np.float32(0.92597663),
 'bertrand': np.float32(0.9607319),
 'kevin': np.float32(0.9082358),
 'felix': np.float32(0.9732063),
 'benoit': np.float32(0.9052551),
 'arnaud': np.float32(0.9875081),
 'derik': np.float32(0.0)}
```

screenshot of 'output[2]'