SLIIT

COMPUTING | BUSINESS | ENGINEERING

Deep Learning
4th Year, 1st Semester

Lab sheet 03

IT21184208

In partial fulfillment of the requirements for the

Bachelor of Science Special Honors Degree in Information Technology

<18/08/2024>

Two Images

Add image 1 for Embedding

```
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)

# Newly added image for encoding
database["test_image1"] = img_to_encoding("images/test_image1.png", FRmodel)
```

Verification - 01

Verification – 02

```
[46] verify("images/test_camera_image2.jpg", "test_image1", database, FRmodel)

It's not test_image1, please go away
(0.8726659, False)
```

Output

```
[48] output = who_is_it("images/test_camera_image4.png", database, FRmodel)

it's test_image1, the distance is 0.6298663
```

Expected Output:

it's younes, the distance is 0.659393 (0.65939283, 'younes')

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

{'younes': 1.1908709,
 'tian': 0.63584846,
 'andrew': 0.88384235,
 'kian': 1.0951394,
 'dan': 1.1266046,
 'sebastiano': 1.012903,
 'bertrand': 1.1604086,
 'kevin': 1.1713977,
 'felix': 1.0434703,
 'benoit': 0.7088141,
 'arnaud': 1.1188676,
 'test_image1': 0.6298663}
```