

Face Recognition System

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In [ ]: !pip install face_recognition
```

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Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Collecting face_recognition
  Downloading face_recognition-1.3.0-py2.py3-none-any.whl (15 kB)
Requirement already satisfied: Click>=6.0 in /usr/local/lib/python3.7/dist-packages (from face_recognition) (7.1.2)
Requirement already satisfied: numpy in /usr/local/lib/python3.7/dist-packages (from face_recognition) (1.21.6)
Requirement already satisfied: Pillow in /usr/local/lib/python3.7/dist-packages (from face_recognition) (7.1.2)
Requirement already satisfied: dlib>=19.7 in /usr/local/lib/python3.7/dist-packages (from face_recognition) (19.24.0)
Collecting face-recognition-models>=0.3.0
  Downloading face_recognition_models-0.3.0.tar.gz (100.1 MB)
    |████████████████████████████████████████| 100.1 MB 1.2 MB/s
Building wheels for collected packages: face-recognition-models
  Building wheel for face-recognition-models (setup.py) ... done
  Created wheel for face-recognition-models: filename=face_recognition_models-0.3.0-py2.py3-none-any.whl size=100566185 sha256=5320c79b5f222adb74bec0dce696c358323163fcelb06631e65cb517d40b0616
  Stored in directory: /root/.cache/pip/wheels/d6/81/3c/884bcd5e1c120ff548d57c2ecc9ebf3281c9a6f7c0e7e7947a
Successfully built face-recognition-models
Installing collected packages: face-recognition-models, face_recognition
Successfully installed face-recognition-1.3.0 face-recognition-models-0.3.0
```

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In [ ]: from google.colab import drive
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In [ ]: drive.mount('/content/drive')
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Mounted at /content/drive

Importing Libraries

```
In [ ]: import cv2
import numpy as np
import face_recognition
```

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In [ ]: from google.colab.patches import cv2_imshow
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In [ ]: imgVirat = face_recognition.load_image_file('/content/drive/MyDrive/Colab No
imgVirat = cv2.cvtColor(imgVirat,cv2.COLOR_BGR2RGB)

#cv2.imshow() does not work on google colab
cv2_imshow(imgVirat)
cv2.waitKey(0)
```



Out[]: -1

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In [ ]: #Testing Image
imgTest = face_recognition.load_image_file('/content/drive/MyDrive/Colab Not
imgTest = cv2.cvtColor(imgTest,cv2.COLOR_BGR2RGB)

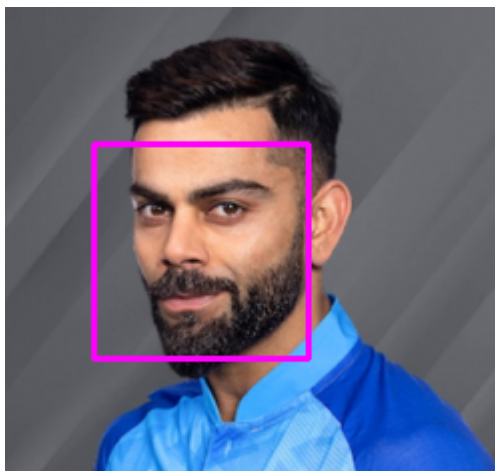
cv2_imshow(imgTest)
```



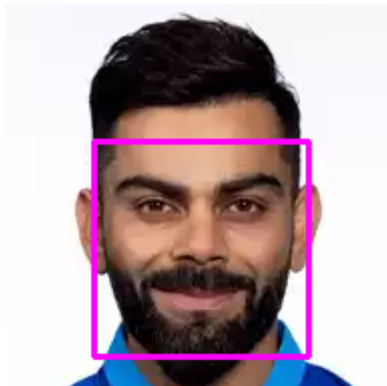
```
In [ ]: #Making Rectangle
faceLoc = face_recognition.face_locations(imgVirat)[0]
encodeVirat = face_recognition.face_encodings(imgVirat)[0]

print(faceLoc)
cv2.rectangle(imgVirat,(faceLoc[3],faceLoc[0]),(faceLoc[1],faceLoc[2]),(255,
cv2_imshow(imgVirat)
cv2_imshow(imgTest)

(68, 151, 175, 44)
```



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In [ ]: faceLocTest = face_recognition.face_locations(imgTest)[0]
encodeViratTest = face_recognition.face_encodings(imgTest)[0]
cv2.rectangle(imgTest,(faceLocTest[3],faceLocTest[0]),(faceLocTest[1],faceLo
cv2_imshow(imgVirat)
cv2_imshow(imgTest)
```



```
In [ ]: #comparing faces
results = face_recognition.compare_faces([encodeVirat],encodeViratTest)
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#finding Distance
faceDis = face_recognition.face_distance([encodeVirat], encodeViratTest)

print(results, faceDis)

[True] [0.3212583]
```

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In [ ]: #giving Name to face
cv2.putText(imgTest, f'{results} {round(faceDis[0],2)}', (50,50), cv2.FONT_HERSHEY_
cv2_imshow(imgVirat)
cv2_imshow(imgTest)
```



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In [ ]:
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