Results:

       

Looking through Image Database for Matches....

FACE FOUND AT POSITION: 8 WITH SSR 382066

Displaying Face Image

Looking through Image Database for Matches....

FACE FOUND AT POSITION: 22 WITH SSR 395099

Displaying Face Image

Looking through Image Database for Matches....

FACE FOUND AT POSITION: 13 WITH SSR 570212

Displaying Face Image

Looking through Image Database for Matches....

FACE FOUND AT POSITION: 3 WITH SSR 392214

Displaying Face Image

Looking through Image Database for Matches....

FACE FOUND AT POSITION: 13 WITH SSR 553954

Displaying Face Image

Looking through Image Database for Matches....

FACE FOUND AT POSITION: 22 WITH SSR 579502

Displaying Face Image

Looking through Image Database for Matches....

FACE FOUND AT POSITION: 8 WITH SSR 397141

Displaying Face Image

Looking through Image Database for Matches....

FACE FOUND AT POSITION: 13 WITH SSR 530200

Displaying Face Image

\*\* I wrote some functions to try to pull the faces from our “database” of images, but it wasn’t working and since that part isn’t part of the assignment ive abandoned it for now. I was able to get all of the faces from the group image as required

Code:

import face\_recognition

import numpy as np

from PIL import Image

from os import path, listdir

IMAGES\_PREPATH = path.dirname(path.realpath(\_\_file\_\_)) + "\\images\\"

FACE\_PATH = path.dirname(path.realpath(\_\_file\_\_)) + "\\"

group = face\_recognition.load\_image\_file("groupphoto.jpg")

face\_locations = face\_recognition.face\_locations(group)

group\_people = []

for i in face\_locations:

    top = i[0]

    right = i[1]

    bottom = i[2]

    left = i[3]

    face\_image = group[top:bottom, left:right]

    group\_people.append(Image.fromarray(face\_image))

# Helper function to compute and return the SSR

def SSR(ar1, ar2):

    return(np.sum((ar1-ar2)\*\*2))

def find\_person(face):

    spec = []

    listing = listdir(IMAGES\_PREPATH)

    finalar = []

    k = 0

    print('Looking through Image Database for Matches....')

    facear = np.array(face)

    for file in listing:

        im = Image.open(IMAGES\_PREPATH + file)

        im = im.resize(face.size)

        im = np.array(im)

        spec.append(im)

    for i in spec:

        k += 1

        finalar.append(SSR(facear, i))

    print('\nFACE FOUND AT POSITION:', finalar.index(min(finalar)), 'WITH SSR', min(finalar))

    print('Displaying Face Image')

    face = finalar.index(min(finalar))

    facepic = Image.fromarray(spec[face])

    # facepic.show()

for face in group\_people:

    face.show()

    find\_person(face)