

Assignment #1 (LO 1)

Name: MUHAMMAD IQBAL BIN MOHD GHAZALI Matric No: 1815805

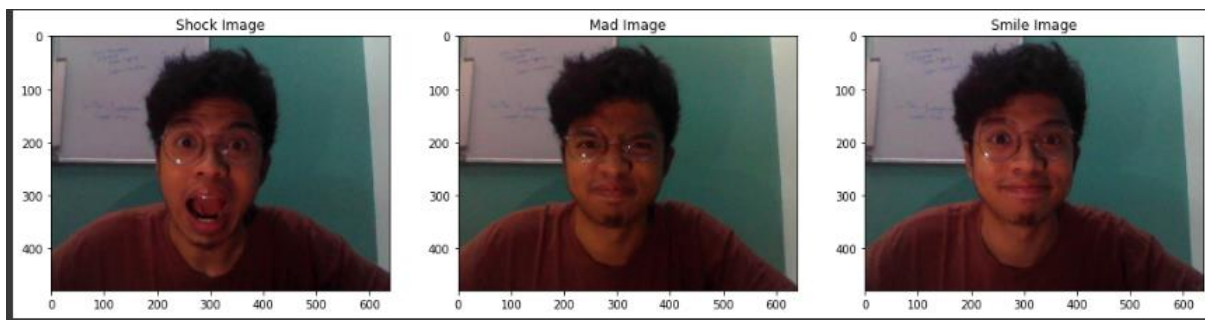
Github Link: <https://github.com/haiiqball/1815805-KPT-Machine-Learning-Assignment-1>
QUESTION 1

List of libraries used:

- IPython.display import display, Javascript
- google.colab.output import eval_js
- base64 import b64decode
- cv2
- numpy as np
- matplotlib.pyplot as plt
- fPIL import Image
- fIPython.display import Image
- %matplotlib inline

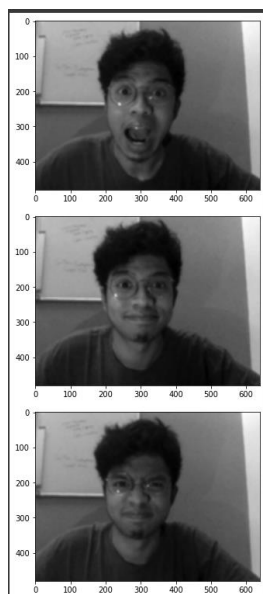
1. Facial Expressions Images

- a. Using webcam to capture 3 images with 3 different expressions.

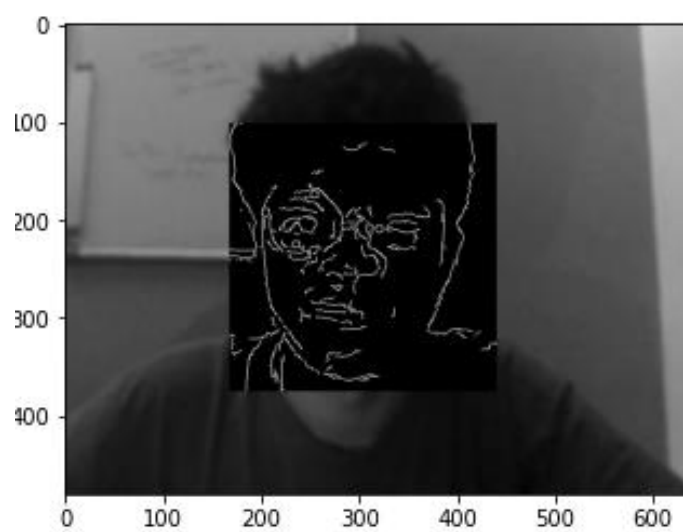
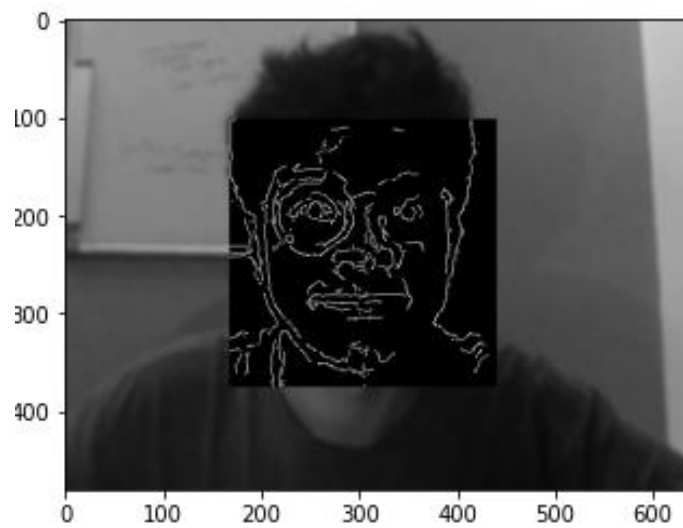
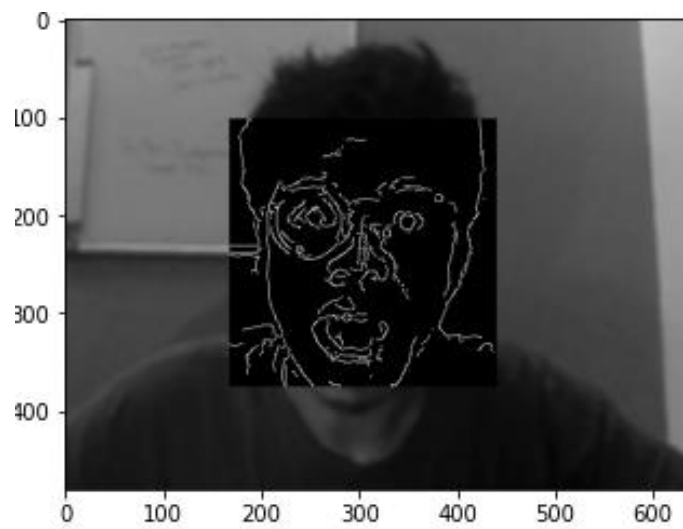


2. Image Processing

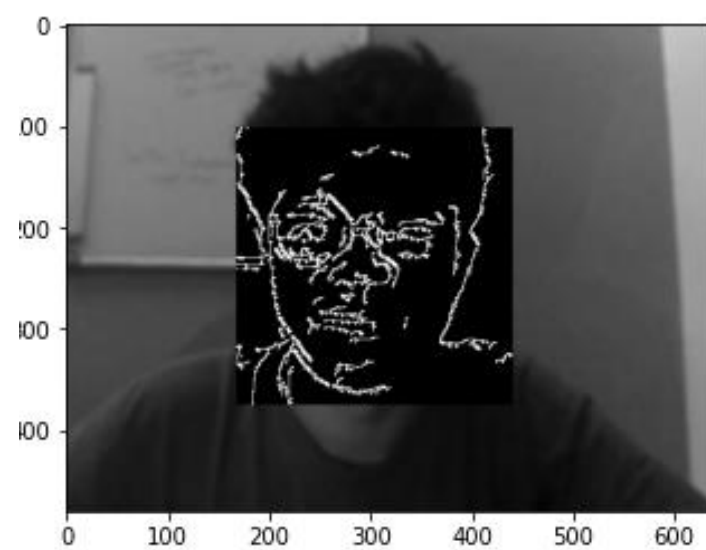
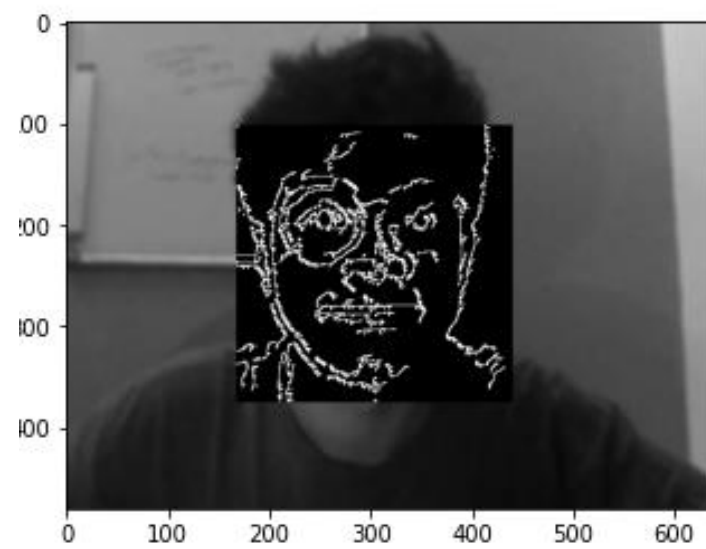
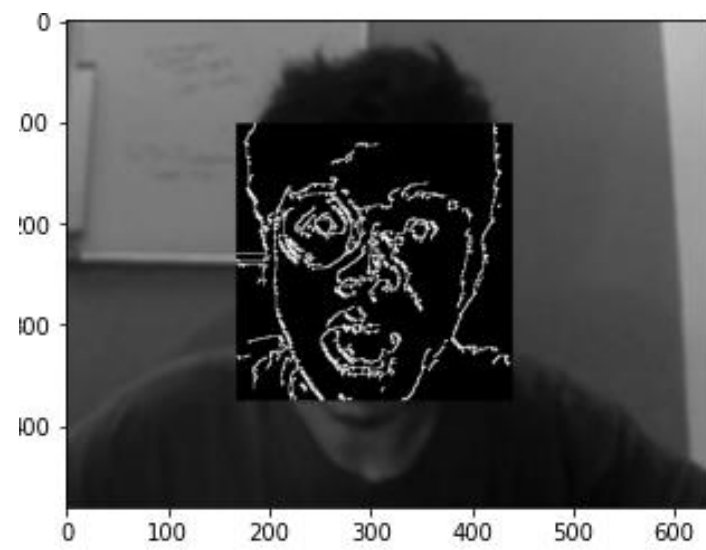
- a. Change to gray image



3. Edge Filtering
 - a. Canny Edge Detection



b. Sobel Edge Detection

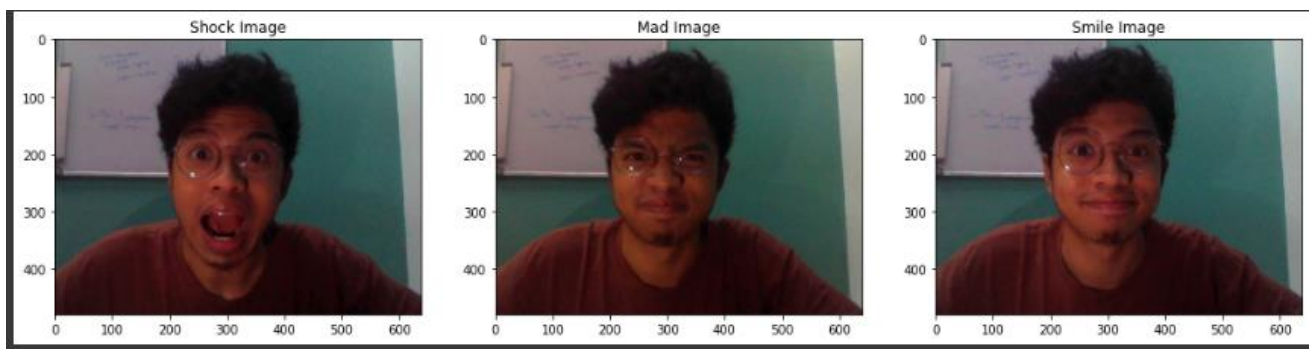


QUESTION 2

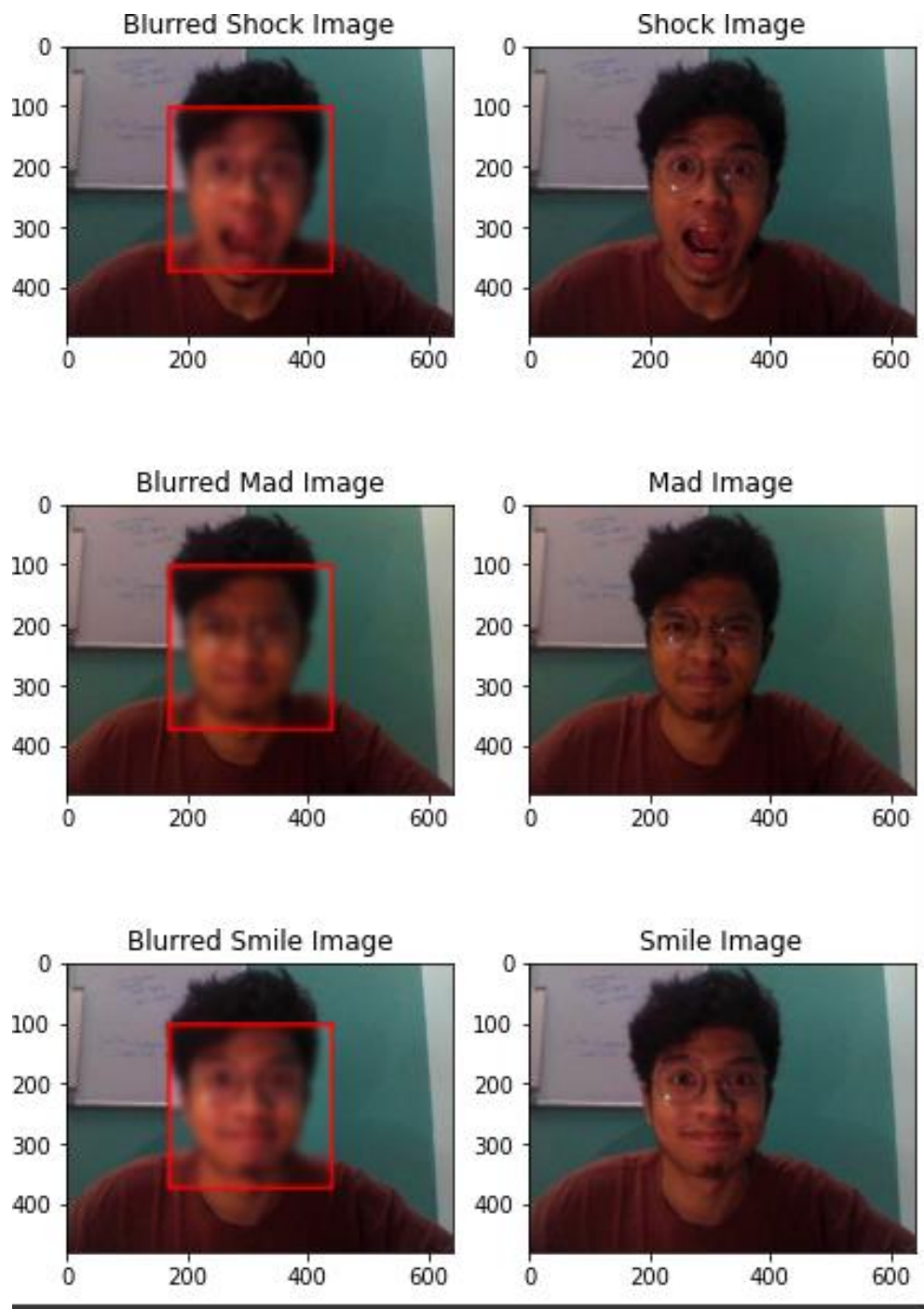
List of libraries used

- IPython.display import display, Javascript
- google.colab.output import eval_js
- base64 import b64decode
- cv2
- numpy as np
- matplotlib.pyplot as plt
- fPIL import Image
- fIPython.display import Image
- %matplotlib inline

1. Import three pictures with three different expressions



2. Detect faces and apply Gaussian Blur

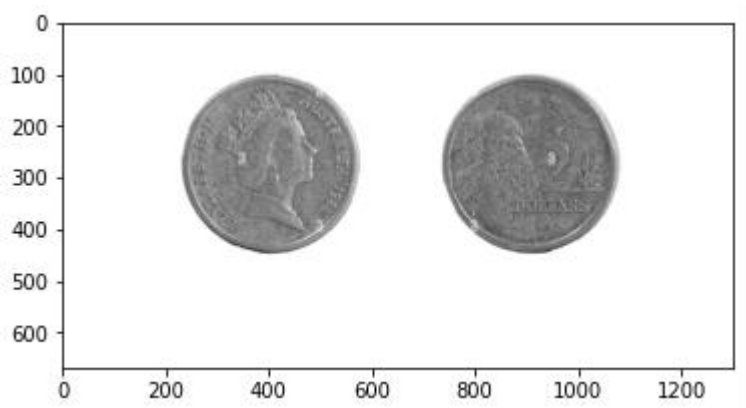


QUESTION 3

List of libraries used

- import cv2
- import numpy as np
- import matplotlib.pyplot as plt
- from PIL import Image
- from IPython.display import Image
- %matplotlib inline

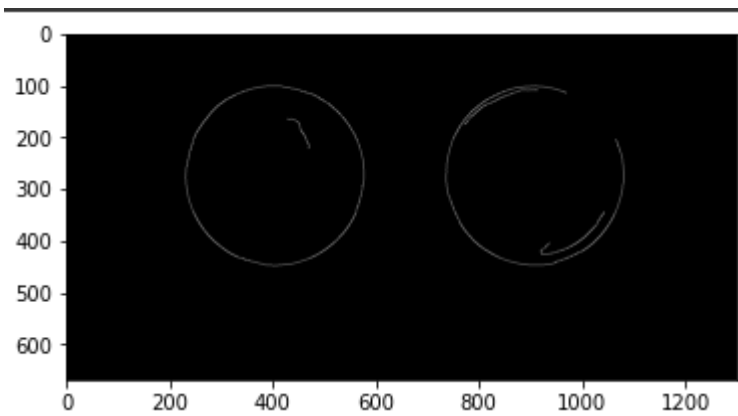
1. Import image of coin



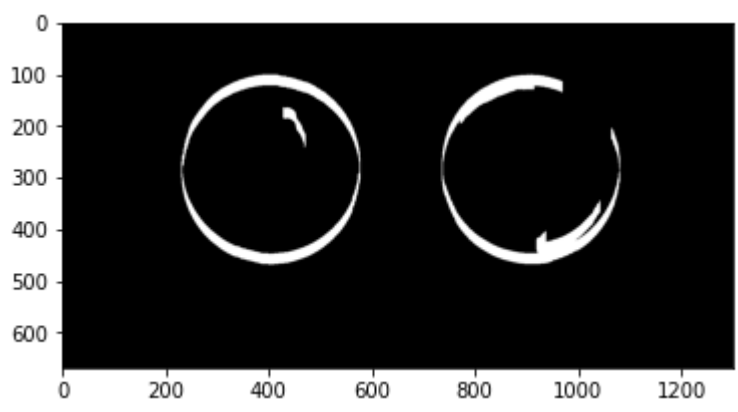
2. Image Processing



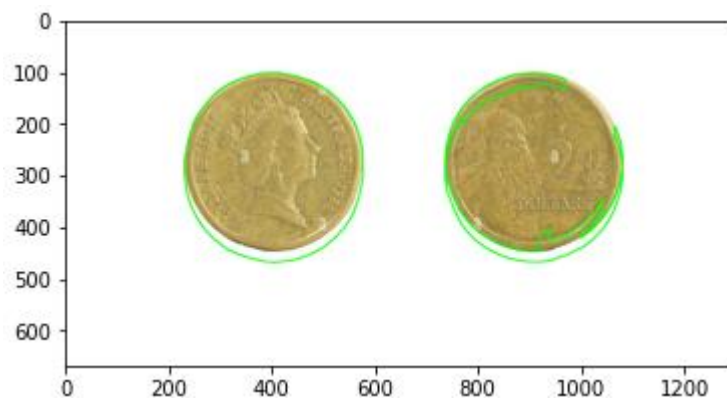
3. Edge Filtering



4. Dilation



5. Apply Contour



6. Calculate number of coins

```
] print(len(countour))
```

```
2
```