

question2

June 29, 2021

```
[1]: import cv2

import numpy as np

import matplotlib.pyplot as plt
%matplotlib inline
```

```
[2]: def getObjects(path):

    # Importing the image and preprocessing the image
    img = cv2.imread(path)
    img = cv2.cvtColor(img, cv2.COLOR_BGR2GRAY)
    img = cv2.resize(img, (512,512))

    # Updating the pixels which have a value greater than the minimum with 255
    → and the others with 0.
    # Essentially, making a binary representation of the image.
    _, thresh = cv2.threshold(img, np.min(img)+10, 255, cv2.THRESH_BINARY_INV)

    # Locating the continuous closed regions where there is positive gradient
    → across the normal.
    contours, hierarchy = cv2.findContours(thresh, cv2.RETR_EXTERNAL, cv2.
    → CHAIN_APPROX_SIMPLE)

    objects = str(len(contours))

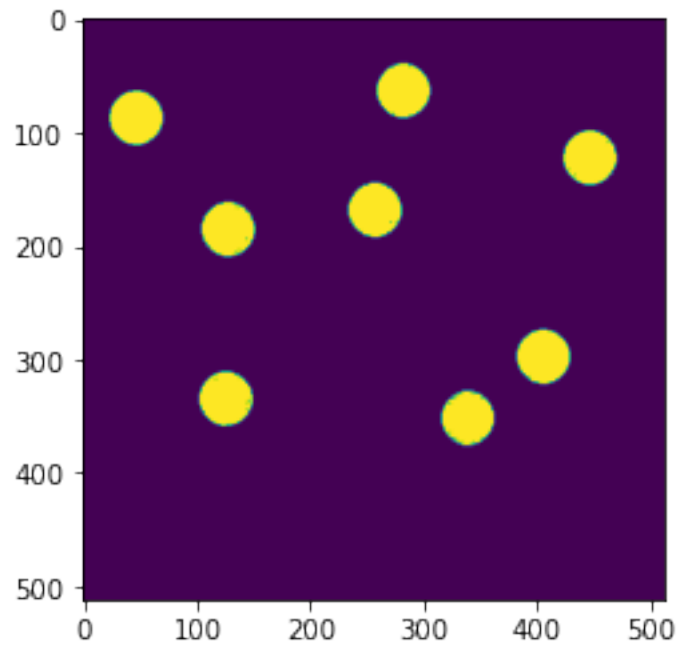
    return thresh, int(objects)
```

0.1 Processing Image 1

```
[3]: thresh, objects = getObjects('Image-1.jpg')
```

```
[4]: plt.imshow(thresh)
```

```
[4]: <matplotlib.image.AxesImage at 0x7f9ece417520>
```



```
[5]: print("Number of objects = ", objects)
```

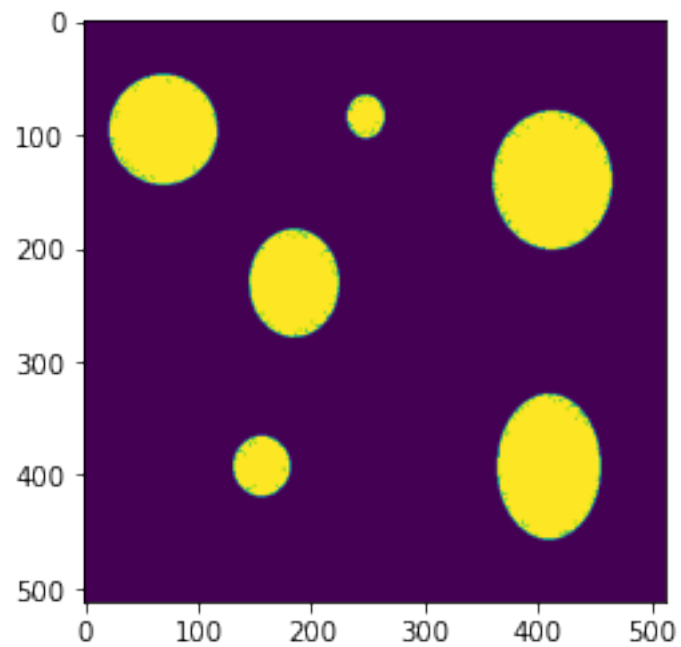
Number of objects = 8

0.2 Processing Image 2

```
[6]: thresh, objects = getObjects('Image-2.jpg')
```

```
[7]: plt.imshow(thresh)
```

```
[7]: <matplotlib.image.AxesImage at 0x7f9ece307a30>
```



```
[8]: print("Number of objects = ", objects)
```

Number of objects = 6

```
[ ]:
```