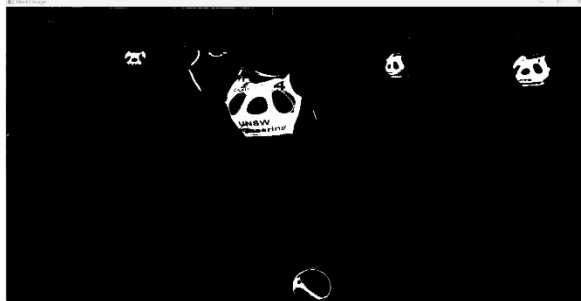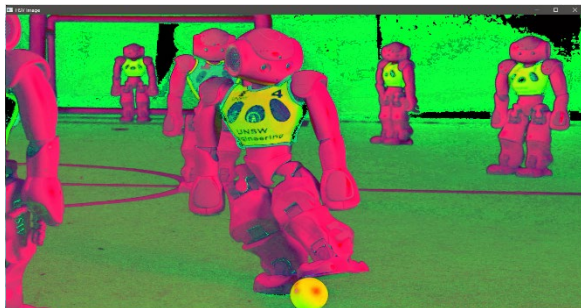# Lab report 3: 202/03/27

- In the <u>first task</u> I learned nothing new. Just opened and showed an image by its path.

- In the <u>second task</u> I learned how to implement a mouse callback function. And get the x and y of the clicked position and print the BGR values for that point.

```
Mouse clicked position (x,y): 308, 330
B: 45 | G: 69 | R: 27
Mouse clicked position (x,y): 621, 232
B: 50 | G: 160 | R: 208
Mouse clicked position (x,y): 399, 537
B: 69 | G: 94 | R: 44
```

```
-------------------------------------------------
Mouse clicked position (x,y): 196, 32
B: 0 | G: 9 | R: 0
Mean [B,G,R,A]:[0.641975, 8.2716, 0.432099, 0]
-------------------------------------------------
Mouse clicked position (x,y): 409, 185
B: 227 | G: 210 | R: 191
Mean [B,G,R,A]:[217.901, 196.346, 176.951, 0]
-------------------------------------------------
Mouse clicked position (x,y): 409, 185
B: 227 | G: 210 | R: 191
Mean [B,G,R,A]:[217.901, 196.346, 176.951, 0]
-------------------------------------------------
```

- In the <u>third task</u> I expanded the second task and added the mean value for each color for the 9*9 neighborhood of the clicked point.

- In the <u>fourth task</u> I learned how to divide the image into 2 segments using threshold. Every pixel with distance of its color with the mean value calculated in the previous task is decided to be white or black.
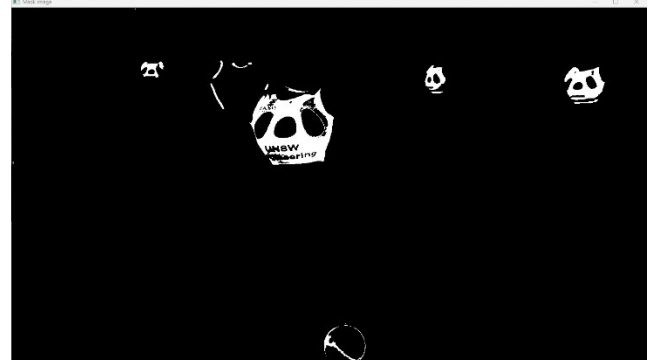
- In the <u>fifth task</u> I did the same as task forth but with HSV image

- In the <u>sixth task</u> I used the all the codes in previous tasks and expanded it to create a new image which is same as the original one in the black areas of the mask and a constant color in the white (chosen) areas.