

APPENDIX

CODING MENCARI VALUE WARNA

```
def masking(event,x,y,flags,param):# fungsi mouse callback

    if event == cv2.EVENT_LBUTTONDOWN:

        pixel = imageHSV[y,x]

        #mengatur range masking

        atas = np.array([pixel[0] + 20, pixel[1] + 20,
pixel[2] + 40])

        bawah = np.array([pixel[0] - 20, pixel[1] - 20,
pixel[2] - 40])

        print(pixel)

        mask = cv2.inRange(imageHSV,bawah,atas)

        cv2.imshow("mask",mask)
```

PROCESS SCALING DAN MENGOLAH DATA GAMBAR MENJADI HSV

```
def main():

    global imageHSV, pixel

    gambar = cv2.imread('2.jpg')

    if gambar is None:

        print ("tidak ada gambar")

        exit(1)

    elif gambar is not None:
```

```

w, h = gambar.shape[:2];

x = int(w * 4);
y = int(h * 4);

xScale = x/(w-1);
yScale = y/(h-1);

gambarbaru = np.zeros([x, y, 3]);

for i in range(x-1):
    for j in range(y-1):
        gambarbaru[i + 1, j + 1] = gambar[1
+ int(i / xScale),
+ int(j / yScale)]

cv2.namedWindow('hsv')

cv2.setMouseCallback('hsv', masking)

imageHSV = cv2.cvtColor(gambar, cv2.COLOR_BGR2HSV)

```

1

PROCESS THERESHOLDING DAN CONVOLUTION KERNEL

```
min = np.array([15,150,50],np.uint8)
max = np.array([30,255,255],np.uint8)
```

```
areaKulit = cv2.inRange(imageHSV,min,max)
```

```
kernel = np.array([[0, -1, 0],
                  [-1, 5, -1],
                  [0, -1, 0]])
```

PROCESS MEMBERIKAN GARIS KONTUR

```
contours, hierarchy = cv2.findContours(areaKulit,
cv2.RETR_TREE, cv2.CHAIN_APPROX_SIMPLE)
```

```
for i, c in enumerate(contours):
    kontur = cv2.contourArea(c)
    if kontur > 1000:
        cv2.drawContours(gambar, contours, i,
(255, 255, 0), 3)
```

```
result = cv2.filter2D(gambar, -1,kernel)
```



1.18% PLAGIARISM APPROXIMATELY

0.36% IN QUOTES

0.71% IN REFERENCES

Report #13357365

Introduction Background My research problem is how to detect jaundice disease with image processing, Jaundice is a condition in which the skin, sclera (whites of the eyes) and mucous membranes turn yellow because of high bilirubin. why did I choose this problem, because this issue is important if jaundice is not detected quickly it will cause kernicterus and can also cause death, especially in Indonesia medical equipment is very limited and hospital costs are expensive to detect this disease. Many people in the middle to lower classes also consider that yellow disease is a minor/trivial disease, according to alodokter.com, although people with this disease can heal by itself, but if it is not detected immediately, it will be very risky because jaundice is a sign of a other dangerous disease in the body who suffer Many studies and journals have tried to solve the problem of detecting jaundice through telehealth, example, like a journal from D. Anggraini about Contribution of information technology (IT) system in overcoming neonatal

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PAGE
1 OF 29