Pengenalan Foto KTP

Kelompok 3 | Kuis 2 | PCVK

Kenalan

01

Alvian Nur Firdaus

2141720022

02

Febrian Dani Ritonga

2141720070

03

Devi Andini

2141720189

04

Naresh Pratista

2141720057

Kenalan

05

Zahra Annisa Wahono

2141720016

Pre-processing

Grayscale, Gaussian Blur, Thresholding

Grayscale

```
1 preprocessed_image = cv2.cvtColor(image, cv2.COLOR_BGR
```

Gaussian Blur

```
1 preprocessed_image = cv2.GaussianBlur(preprocessed_image,
```

Thresholding

```
1 _, binary_image = cv2.threshold(preprocessed_image, 0, 255, cv2.THRESH_BINARY + cv2.THRESH_
```

Localization

Contours, DetectMultiScale

Face Detection

```
faces = detector.detectMultiScale(
    preprocessed_image,
    scaleFactor=1.1,
    minNeighbors=5,
    minSize=(30, 30),
    flags=cv2.CASCADE_SCALE_IMAGE
)
```

Segmentation

```
largest_face = max(faces, key=lambda face: face[2] * face[3])

# Segment the largest face
(x, y, w, h) = largest_face
wajah_roi = preprocessed_image[y:y+h, x:x+w]
# Resize gambar wajah ke ukuran 28x28
wajah = cv2.resize(wajah_roi, (28, 28))

plt.title("Citra Hasil Segmentasi")
plt.imshow(wajah, cmap="gray")
plt.axis("off")
```

01

Our company

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Pengenalan

Testing & Predict Model

Hasil Testing Naresh

Citra Asli

Citra Hasil Preprocessing

Binary Image

Kontur pada Citra Asli

Jumlah Wajah Terdeteksi: 1

Citra Hasil Lokalisasi

Citra Hasil Segmentasi

```
print(label_dict)
```

```
{'Alvian Nur Firdaus': 0, 'Devi Andini Febrianti': 1, 'Febrian Dani': 2, 'Naresh Pratista': 3, 'Zahra Annisa Wahono': 4}
```

```
[38] # Membaca model CNN
model = cv2.face.LBPHFaceRecognizer_create()
model.read("model.xml")


# Prediksi nama pemilik wajah
label, confidence = model.predict(wajah)

print(label)
print("Nama: ", label)
print("Confidence: ", confidence)
```

```
3
Nama:  3
Confidence:  150.85326438150736
```

Hasil Predict Naresh

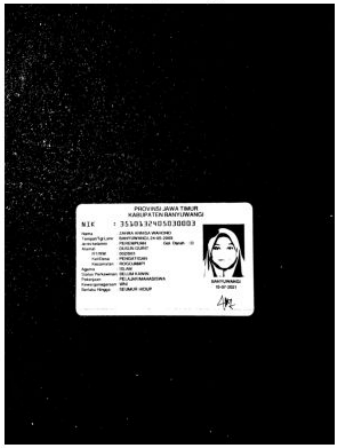
Citra Hasil Segmentasi

Hasil Testing Zahra

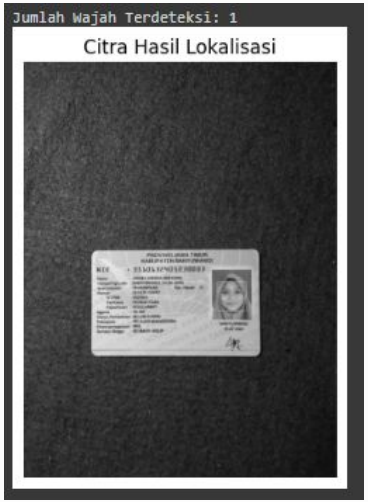
Citra Asli

Citra Hasil Preprocessing

Binary Image



Kontur pada Citra Asli



Citra Hasil Segmentasi

```
[ ] print(label_dict)

    {'Alvian Nur Firdaus': 0, 'Devi Andini Febrianti': 1, 'Febrian Dani': 2, 'Naresh Pratista': 3, 'Zahra Annisa Wahono': 4}

[ ] # Membaca model CNN
    model = cv2.face.LBPHFaceRecognizer_create()
    model.read("model.xml")


    # Prediksi nama pemilik wajah
    label, confidence = model.predict(wajah)

    print(label)
    print("Nama: ", label)
    print("Confidence: ", confidence)

    4
    Nama:  4
    Confidence:  148.6089160847435
```

Hasil Predict Zahra

Hasil Testing Dani

Citra Asli

Citra Hasil Preprocessing

Binary Image

Kontur pada Citra Asli

Jumlah Wajah Terdeteksi: 1

Citra Hasil Lokalisasi

Citra Hasil Segmentasi

```
[30] print(label_dict)

     {'Alvian Nur Firdaus': 0, 'Devi Andini Febrianti': 1, 'Febrian Dani': 2, 'Naresh Pratista': 3, 'Zahra Annisa Wahono': 4}

[31] # Membaca model CNN
     model = cv2.face.LBPHFaceRecognizer_create()
     model.read("model.xml")


     # Prediksi nama pemilik wajah
     label, confidence = model.predict(wajah)

     print(label)
     print("Nama: ", label)
     print("Confidence: ", confidence)

     2
     Nama:  2
     Confidence:  165.0659629319128
```

Hasil Predict Dani

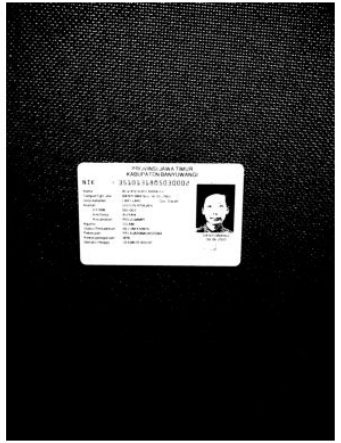
Citra Hasil Segmentasi

Hasil Testing Alvian

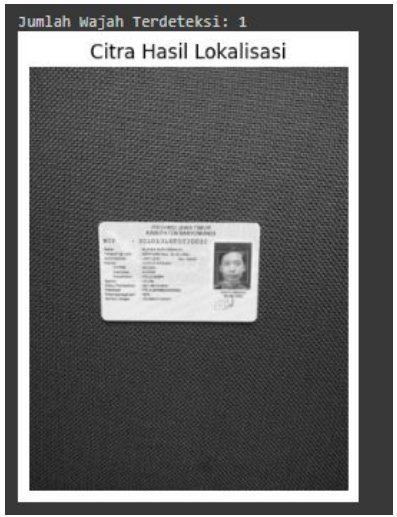
Citra Asli

Citra Hasil Preprocessing

Binary Image



Kontur pada Citra Asli



Citra Hasil Segmentasi

```
[44] print(label_dict)

{'Alvian Nur Firdaus': 0, 'Devi Andini Febrianti': 1, 'Febrian Dani': 2, 'Naresh Pratista': 3, 'Zahra Annisa Wahono': 4}

[45] # Membaca model CNN
     model = cv2.face.LBPHFaceRecognizer_create()
     model.read("model.xml")


     # Prediksi nama pemilik wajah
     label, confidence = model.predict(wajah)

     print(label)
     print("Nama: ", label)
     print("Confidence: ", confidence)

     0
     Nama:  0
     Confidence:  138.723618677764
```

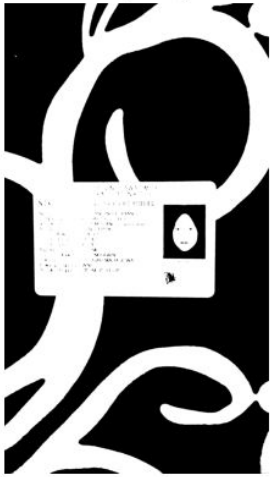
Hasil Predict Alvian

Hasil Testing Devi

Citra Asli

Citra Hasil Preprocessing

Binary Image



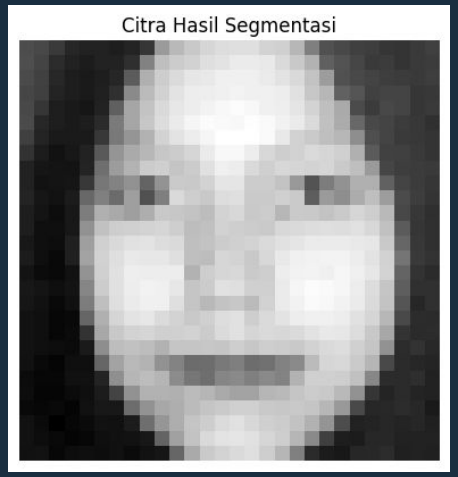
Kontur pada Citra Asli

Citra Hasil Lokalisasi

Citra Hasil Segmentasi

```
[22] print(label_dict)

     {'Alvian Nur Firdaus': 0, 'Devi Andini Febrianti': 1, 'Febrian Dani': 2, 'Naresh Pratista': 3, 'Zahra Annisa Wahono': 4}

[23] # Membaca model CNN
     model = cv2.face.LBPHFaceRecognizer_create()
     model.read("model.xml")


     # Prediksi nama pemilik wajah
     label, confidence = model.predict(wajah)

     print(label)
     print("Nama: ", label)
     print("Confidence: ", confidence)

     1
     Nama:  1
     Confidence:  139.97684726107622
```

Hasil Predict Devi



Terima Kasih