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modul 12 - opencv prediksi warna (3).py - C:/Users/modul 12 - opencv prediksi warna (3).py (3.11.9)
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import cv2
import numpy as np
import csv
import time
from sklearn import svm
import pandas as pd
from sklearn.preprocessing import StandardScaler

# Konfigurasi Kamera
cap = cv2.VideoCapture(0)
cap.set(cv2.CAP_PROP_FRAME_WIDTH, 480)
cap.set(cv2.CAP_PROP_FRAME_HEIGHT, 360)

# Membaca Database
FileDB = 'DatabaseWarna.txt' # Pastikan file ini tersedia dan formatnya benar
Database = pd.read_csv(FileDB, sep=",", header=0)
print("Database:\n", Database)

# X = Data (B, G, R), y = Target
X = Database[['B', 'G', 'R']]
y = Database['Target']

# Normalisasi Data dan Pelatihan Model SVM
scaler = StandardScaler()
X_scaled = scaler.fit_transform(X) # Normalisasi data
clf = svm.SVC(kernel='linear') # Gunakan kernel linear
clf.fit(X_scaled, y)

# Fungsi Prediksi Warna
def predict_color(b, g, r):
    color_scaled = scaler.transform([[b, g, r]])
    try:
        prediction = clf.predict(color_scaled)[0] # Ambil hasil prediksi
        return prediction
    except Exception as e:
        return "Tidak Teridentifikasi"

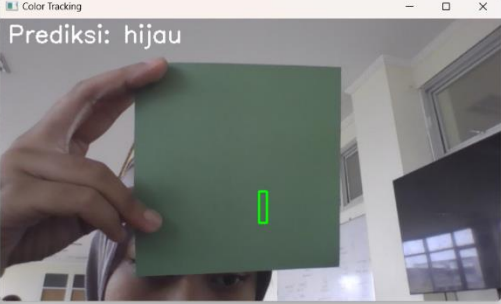
# Loop Kamera untuk Prediksi
while True:
    ret, img = cap.read()
    if not ret:
        print("Gagal membaca frame dari kamera.")
        break

    img = cv2.flip(img, 1) # Membalikkan kamera jika terbalik

IDLE Shell 3.11.9
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warnings.warn(
UserWarning: X does not have valid feature names, but StandardScaler was fitted with fea
ture names
B: 86, G: 100, R: 81 => Prediksi: hijau

Warning (from warnings module):
  File "C:/Users/user/AppData/Local/Packages/PythonSoftwareFoundation.Python.3.11_qbz5n2
Kfra8p0/LocalCache/local-packages/Python311/site-packages/sklearn/base.py", line 493
    warnings.warn(
UserWarning: X does not have valid feature names, but StandardScaler was fitted with fea
ture names
B: 86, G: 100, R: 81 => Prediksi: hijau

Warning (from warnings module):
  File "C:/Users/user/AppData/Local/Packages/PythonSoftwareFoundation.Python.3.11_qbz5n2
Kfra8p0/LocalCache/local-packages/Python311/site-packages/sklearn/base.py", line 493
    warnings.warn(
UserWarning: X does not have valid feature names, but StandardScaler was fitted with fea
ture names
B: 85, G: 99, R: 80 => Prediksi: hijau

Color Tracking
Ln: 5 Col: 0
Prediksi: hijau

Ln: 13 Col: 0

Cosinus.txt * Cosinus.txt modul 9.txt trapezoid.txt espiem.txt DatabaseWarna.txt Databasewarna.txt
File Edit View
B.G.R.Target
136,137,127,hijau
133,134,125,hijau
133,134,125,hijau
133,134,125,hijau
133,134,126,hijau
134,135,126,hijau
133,134,125,hijau
130,131,122,hijau
129,130,121,hijau
128,129,120,hijau
128,129,119,hijau
128,129,120,hijau
128,129,120,hijau
127,128,119,hijau
127,128,119,hijau
127,128,119,hijau
127,128,119,hijau
127,128,119,hijau
128,128,119,hijau
128,128,119,hijau
33,29,32,hitam
33,29,32,hitam
33,29,32,hitam
33,29,32,hitam
33,29,32,hitam
33,29,32,hitam
33,30,32,hitam
35,31,33,hitam
35,31,34,hitam
35,31,34,hitam
35,31,34,hitam
35,31,34,hitam
35,31,34,hitam
35,31,34,hitam
36,32,35,hitam
37,33,35,hitam
38,34,37,hitam
38,34,37,hitam
Ln 1, Col 1 1,434 characters 100% Windows (CRLF) UTF-8
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