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LAMPIRAN-LAMPIRAN

Listing Program

```
function varargout = MAIN(varargin)
% MAIN MATLAB code for MAIN.fig
%     MAIN, by itself, creates a new MAIN or raises the existing
%     singleton*.
%
%     H = MAIN returns the handle to a new MAIN or the handle to
%     the existing singleton*.
%
%     MAIN('CALLBACK',hObject,eventData,handles,...) calls the
local
%     function named CALLBACK in MAIN.M with the given input
arguments.
%
%     MAIN('Property','Value',...) creates a new MAIN or raises
the
%     existing singleton*. Starting from the left, property
value pairs are
%     applied to the GUI before MAIN_OpeningFcn gets called. An
%     unrecognized property name or invalid value makes property
application
%     stop. All inputs are passed to MAIN_OpeningFcn via
varargin.
%
%     *See GUI Options on GUIDE's Tools menu. Choose "GUI
allows only one
%     instance to run (singleton)".
%
% See also: GUIDE, GUIDATA, GUIHANDLES

% Edit the above text to modify the response to help MAIN

% Last Modified by GUIDE v2.5 01-Oct-2021 17:56:25

% Begin initialization code - DO NOT EDIT
gui_Singleton = 1;
gui_State = struct('gui_Name',       mfilename, ...
                  'gui_Singleton',  gui_Singleton, ...
                  'gui_OpeningFcn', @MAIN_OpeningFcn, ...
                  'gui_OutputFcn',  @MAIN_OutputFcn, ...
                  'gui_LayoutFcn',  [] , ...
                  'gui_Callback',   []);
if nargin && ischar(varargin{1})
    gui_State.gui_Callback = str2func(varargin{1});
end

if nargout
```

```

    [varargout{1:nargout}] = gui_mainfcn(gui_State, varargin{:});
else
    gui_mainfcn(gui_State, varargin{:});
end
% End initialization code - DO NOT EDIT

% --- Executes just before MAIN is made visible.
function MAIN_OpeningFcn(hObject, eventdata, handles, varargin)
% This function has no output args, see OutputFcn.
% hObject    handle to figure
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
% varargin   command line arguments to MAIN (see VARARGIN)
clc;
% Choose default command line output for MAIN
handles.output = hObject;

% Update handles structure
guidata(hObject, handles);

% UIWAIT makes MAIN wait for user response (see UIRESUME)
% uiwait(handles.figure1);
logo = imread('logo.png');
axes(handles.axes1);
imshow(logo);
% foto = imread('nikita.jpg');
% axes(handles.axes6);
% imshow(foto);

% --- Outputs from this function are returned to the command
line.
function varargout = MAIN_OutputFcn(hObject, eventdata, handles)
% varargout  cell array for returning output args (see
VARARGOUT);
% hObject    handle to figure
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)

% Get default command line output from handles structure
varargout{1} = handles.output;

function edit1_Callback(hObject, eventdata, handles)
% hObject    handle to edit1 (see GCBO)

```

```

% eventdata reserved - to be defined in a future version of
MATLAB
% handles structure with handles and user data (see GUIDATA)

% Hints: get(hObject,'String') returns contents of edit1 as text
% str2double(get(hObject,'String')) returns contents of
edit1 as a double

% --- Executes during object creation, after setting all
properties.
function edit1_CreateFcn(hObject, eventdata, handles)
% hObject handle to edit1 (see GCBO)
% eventdata reserved - to be defined in a future version of
MATLAB
% handles empty - handles not created until after all
CreateFcns called

% Hint: edit controls usually have a white background on Windows.
% See ISPC and COMPUTER.
if ispc && isequal(get(hObject,'BackgroundColor'),
get(0,'defaultUicontrolBackgroundColor'))
    set(hObject,'BackgroundColor','white');
end

% --- Executes on button press in pushbutton1.
function pushbutton1_Callback(hObject, eventdata, handles)
% hObject handle to pushbutton1 (see GCBO)
% eventdata reserved - to be defined in a future version of
MATLAB
% handles structure with handles and user data (see GUIDATA)
folder_name = uigetdir(pwd, 'Select the directory of images');
if ( folder_name ~= 0 )
    handles.folder_name = folder_name;
    guidata(hObject, handles);
else
    return;
end

set(handles.edit1,'String',folder_name);

% --- Executes on button press in pushbutton2.
function pushbutton2_Callback(hObject, eventdata, handles)
% hObject handle to pushbutton2 (see GCBO)
% eventdata reserved - to be defined in a future version of
MATLAB
% handles structure with handles and user data (see GUIDATA)
% membaca file citra dalam folder

```

```

image_folder = fullfile(handles.folder_name);
filenames = dir(fullfile(image_folder, '*.bmp'));
jumlah_data = numel(filenames);

% menginisialisasi variabel data_latih
data_latih = zeros(jumlah_data,5);

% proses ekstraksi ciri lbp dan ciri vector histogram
for k = 1:jumlah_data
    full_name= fullfile(image_folder, filenames(k).name);
    img = imread(full_name);
    img = rgb2gray(img);
    lbpFeatures = extractLBPFeatures(img,'CellSize',[128
128],'Normalization','None');
    numNeighbors = 8;
    numBins = numNeighbors*(numNeighbors-1)+3;
    lbpCellHists = reshape(lbpFeatures,numBins,[]);
    lbpCellHists =
bsxfun(@rdivide,lbpCellHists,sum(lbpCellHists));
    lbpFeatures = reshape(lbpCellHists,1,[]);
    H = imhist(lbpFeatures)';
    H = H/sum(H);
    I = 0:255;
    IndMean = I*H';
    IndEnt = -H*log2(H+eps)';
    IndVar = (I-IndMean).^2*H';
    IndSkew = (I-IndMean).^3*H'/IndVar^1.5;
    IndKur = (I-IndMean).^4*H'/IndVar^2-3;
    data_latih(k,:) = [IndMean,IndEnt,IndVar,IndSkew,IndKur];
end

% menampilkan hasil ekstraksi ciri lbp dan ciri vector histogram
pada tabel
data_tabel = cell(5,2);
data_tabel{1,1} = 'Indikator Mean';
data_tabel{2,1} = 'Indikator Entropy';
data_tabel{3,1} = 'Indikator Variance';
data_tabel{4,1} = 'Indikator Skewness';
data_tabel{5,1} = 'Indikator Kurtosis';
data_tabel{1,2} = num2str(IndMean);
data_tabel{2,2} = num2str(IndEnt);
data_tabel{3,2} = num2str(IndVar);
data_tabel{4,2} = num2str(IndSkew);
data_tabel{5,2} = num2str(IndKur);
set(handles.uitable1,'Data',data_tabel,'RowName',1:5)

% penentuan nilai target untuk masing2 jenis kurma
target_latih = zeros(1,jumlah_data);
target_latih(1:10) = 1;

```

```

target_latih(11:20) = 2;
target_latih(21:30) = 3;
target_latih(31:40) = 4;

% pelatihan menggunakan algoritma multisvm
output = multisvm(data_latih,target_latih,data_latih);
set(handles.uitable2,'Data',output)

% menghitung nilai akurasi pelatihan
[n,~] = find(target_latih==output');
jumlah_benar = sum(n);
akurasi = jumlah_benar/jumlah_data*100

% menyimpan variabel data_latih dan target_latih
save hasil_data_latih data_latih
save hasil_target_latih target_latih

% menampilkan hasil klasifikasi jenis kurma pada edit text
set(handles.edit2,'String',jumlah_data)
set(handles.edit3,'String',jumlah_benar)
set(handles.edit4,'String',akurasi)

% --- Executes on button press in pushbutton3.
function pushbutton3_Callback(hObject, eventdata, handles)
% hObject    handle to pushbutton3 (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
% merreset button2
    set(handles.edit1,'String',[])
    set(handles.edit2,'String',[])
    set(handles.edit3,'String',[])
    set(handles.edit4,'String',[])
    set(handles.uitable1,'Data',[])
    set(handles.uitable2,'Data',[])

% --- Executes on button press in pushbutton4.
function pushbutton4_Callback(hObject, eventdata, handles)
% hObject    handle to pushbutton4 (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)

function edit2_Callback(hObject, eventdata, handles)
% hObject    handle to edit2 (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB

```

```

% handles      structure with handles and user data (see GUIDATA)

% Hints: get(hObject,'String') returns contents of edit2 as text
%         str2double(get(hObject,'String')) returns contents of
edit2 as a double

% --- Executes during object creation, after setting all
properties.
function edit2_CreateFcn(hObject, eventdata, handles)
% hObject      handle to edit2 (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB
% handles      empty - handles not created until after all
CreateFcns called

% Hint: edit controls usually have a white background on Windows.
%         See ISPC and COMPUTER.
if ispc && isequal(get(hObject,'BackgroundColor'),
get(0,'defaultUiControlBackgroundColor'))
    set(hObject,'BackgroundColor','white');
end

function edit3_Callback(hObject, eventdata, handles)
% hObject      handle to edit3 (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB
% handles      structure with handles and user data (see GUIDATA)

% Hints: get(hObject,'String') returns contents of edit3 as text
%         str2double(get(hObject,'String')) returns contents of
edit3 as a double

% --- Executes during object creation, after setting all
properties.
function edit3_CreateFcn(hObject, eventdata, handles)
% hObject      handle to edit3 (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB
% handles      empty - handles not created until after all
CreateFcns called

% Hint: edit controls usually have a white background on Windows.
%         See ISPC and COMPUTER.
if ispc && isequal(get(hObject,'BackgroundColor'),
get(0,'defaultUiControlBackgroundColor'))

```



```
    set(hObject,'BackgroundColor','white');
end
```

```
function edit4_Callback(hObject, eventdata, handles)
% hObject    handle to edit4 (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)

% Hints: get(hObject,'String') returns contents of edit4 as text
%        str2double(get(hObject,'String')) returns contents of
edit4 as a double
```

```
% --- Executes during object creation, after setting all
properties.
function edit4_CreateFcn(hObject, eventdata, handles)
% hObject    handle to edit4 (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    empty - handles not created until after all
CreateFcns called

% Hint: edit controls usually have a white background on Windows.
%        See ISPC and COMPUTER.
if ispc && isequal(get(hObject,'BackgroundColor'),
get(0,'defaultUicontrolBackgroundColor'))
    set(hObject,'BackgroundColor','white');
end
```

```
% --- Executes on button press in pushbutton8.
function pushbutton8_Callback(hObject, eventdata, handles)
% hObject    handle to pushbutton8 (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
folder_name = uigetdir(pwd, 'Select the directory of images');
if ( folder_name ~= 0 )
    handles.folder_name = folder_name;
    guidata(hObject, handles);
else
    return;
end
```

```
set(handles.edit1,'String',folder_name);
```

```

% --- Executes on button press in pushbutton9.
function pushbutton9_Callback(hObject, eventdata, handles)
% hObject    handle to pushbutton9 (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)

image_folder = fullfile(handles.folder_name);
filenames = dir(fullfile(image_folder, '*.bmp'));
jumlah_data = numel(filenames);

% menginisialisasi variabel data_uji
data_uji = zeros(jumlah_data,5);

% proses ekstraksi ciri lbp dan ciri vector histogram
for k = 1:jumlah_data
    full_name= fullfile(image_folder, filenames(k).name);
    img = imread(full_name);
    img = rgb2gray(img);
    lbpFeatures = extractLBPFeatures(img,'CellSize',[128
128],'Normalization','None');
    numNeighbors = 8;
    numBins = numNeighbors*(numNeighbors-1)+3;
    lbpCellHists = reshape(lbpFeatures,numBins,[]);
    lbpCellHists =
bsxfun(@rdivide,lbpCellHists,sum(lbpCellHists));
    lbpFeatures = reshape(lbpCellHists,1,[]);
    H = imhist(lbpFeatures)';
    H = H/sum(H);
    I = 0:255;
    IndMean = I*H';
    IndEnt = -H*log2(H+eps)';
    IndVar = (I-IndMean).^2*H';
    IndSkew = (I-IndMean).^3*H'/IndVar^1.5;
    IndKur = (I-IndMean).^4*H'/IndVar^2-3;
    data_uji(k,:) = [IndMean,IndEnt,IndVar,IndSkew,IndKur];
end
% menampilkan hasil ekstraksi ciri lbp dan ciri vector histogram
pada tabel
data_tabel = cell(5,2);
data_tabel{1,1} = 'Indikator Mean';
data_tabel{2,1} = 'Indikator Entropy';
data_tabel{3,1} = 'Indikator Variance';
data_tabel{4,1} = 'Indikator Skewness';
data_tabel{5,1} = 'Indikator Kurtosis';
data_tabel{1,2} = num2str(IndMean);
data_tabel{2,2} = num2str(IndEnt);
data_tabel{3,2} = num2str(IndVar);
data_tabel{4,2} = num2str(IndSkew);

```

```
data_tabel{5,2} = num2str(IndKur);
set(handles.uitable1,'Data',data_tabel,'RowName',1:5)

% penentuan nilai target untuk masing2 jenis UANG
target_uji = zeros(1,jumlah_data);
target_uji(1:5) = 1;
target_uji(6:10) = 2;
target_uji(11:15) = 3;
target_uji(16:20) = 4;

% load data_latih dan target_latih hasil pelatihan
load hasil_data_latih
load hasil_target_latih

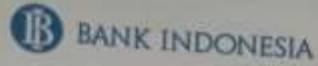
% pengujian menggunakan algoritma multisvm
output = multisvm(data_latih,target_latih,data_uji);
set(handles.uitable2,'Data',output)

% menghitung nilai akurasi pengujian
[n,~] = find(target_uji==output');
jumlah_benar = sum(n);
akurasi = jumlah_benar/jumlah_data*100

% menampilkan hasil klasifikasi jenis kurma pada edit text
set(handles.edit2,'String',jumlah_data)
set(handles.edit3,'String',jumlah_benar)
set(handles.edit4,'String',akurasi)
```



SURAT IZIN RISET



No. 23/¹⁴⁵/Pms/Srt-B
Lamp. : 1 (satu) set

Pematangsiantar, 16 Maret 2021

Kepada Yth. Bapak/Ibu Pimpinan Universitas Islam Negeri Sumatera Utara
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Medan

Perihal: Izin Riset Identifikasi Keaslian Uang Rupiah

Menindaklanjuti surat saudara Nomor : B.181/ST.1ST.V3/TL.00/3/2021 tanggal 2 Maret 2021 perihal izin riset, dengan ini diberitahukan bahwa mahasiswa saudara kami berikan izin untuk melaksanakan riset dikantor kami guna memperoleh informasi/keterangan dan data-data yang berkaitan dengan identifikasi keaslian uang rupiah.

Demikian agar dapat diterima dengan baik, atas perhatiannya diucapkan terima kasih.

Kantor Perwakilan Bank Indonesia
Pematangsiantar
Pj. Deputi Kepala Perwakilan

Abdul Harris
Manajer

KARTU BIMBINGAN

KARTU BIMBINGAN SKRIPSI
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Judul Skripsi : Keaktifan users keras berdasarkan penyelesaian cara digital dengan menggunakan metode local Binary Pattern dan Support Vector Machine.

No	Tgl	PEMBIMBING I		PEMBIMBING II		
		Materi Bimbingan	Tanda Tangan	Tgl	Materi Bimbingan	Tanda Tangan
I	27/Jan/20	Bimbingan Mengenal Bab I		14/Jan/20	Bimbingan Proposal	
II	14/Jan/20	Acc bab I dan bab II Revisi Bab II		14/Jan/20	Bimbingan bab 3 Revisi 1 dan bab 3 - bab 2	
III	29/Jan/20	Acc Proposal bab 2-bab 3		14/Jan/20	Bab III All Review	
IV	14/Jan/20	Bimbingan bab 4 + Revisi bab 4		14/Jan/20	Bimbingan Keras bab 4 + Revisi	
V	14/Jan/20	Bimbingan Bab 4 + Acc ulang		14/Jan/20	Bimbingan bab 4 + Acc ulang	

Buku Laporan Kegiatan Akademik Universitas SAINTEK UIN-SU Medan | 28

Daftar Riwayat Hidup



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