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LAMPIRAN

Lampiran A Surat – Surat

Surat Pengantar Observasi

SEKOLAH TINGGI ILMU KOMPUTER
STIKOM POLTEK

Nomor : 0631/SOTA/STIKOMPOLTEK/S1/TI/IX/2021
Perihal : Observasi

Yth. **Kepala**
Radar Cirebon
Di
Cirebon

Dengan Hormat,

Dalam rangka penyusunan Tugas Akhir bagi para mahasiswa STIKOM POLTEK Cirebon yang akan menyelesaikan masa studinya, maka memohon bantuan kepada Bapak/Ibu agar dapat memberikan izin kepada mahasiswa/i untuk dapat melakukan observasi mulai dari tanggal 15 September 2021 sampai dengan tanggal 24 September 2021 pada perusahaan/instansi yang Bapak/Ibu pimpin. Berikut ini daftar mahasiswa kami yang akan melakukan observasi :

No.	NRP	Nama Mahasiswa	Program Studi
1	14517408	Danny Fachrul Aliansyah Nurdin	Teknik Informatika

Adapun judul yang akan diambil adalah **"METODE LOCAL BINARY PATTERN HISTOGRAM (LBPH) PENGENALAN WAJAH PADA SISTEM ABSENSI ONLINE KARYAWAN RADAR CIREBON".**

Demikian surat permohonan ini kami buat, atas perhatian dan kerja sama yang baik kami ucapkan terima kasih.

Cirebon, 15 September 2021
Ketua Program Studi
Teknik Informatika

Cucu Handayani, M.Kom
NIP: 1104021

YAYASAN
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INDONESIA
Email : stikompoltek@stikompoltek.ac.id

KAMPUS
Jl. Brigjend Darsono No. 33 Cirebon, 45153
Phone (0231) 486475 Ext.82 Fax (0231) 484005
Homepage : www.stikompoltek.ac.id

Surat Penilaian Observasi

SEKOLAH TINGGI ILMU KOMPUTER
STIKOM
POLTEK

Nomor : 0538/SPNOTA/STIKOMPOLTEK/S1/TI/IX/2021
Lampiran : 1 Lembar
Perihal : Penilaian Observasi Tugas Akhir

Yth. **Kepala**
Radar Cirebon
Di
Cirebon

Disampaikan dengan hormat, dengan adanya mahasiswa yang telah menyelesaikan Observasi Tugas Akhir di perusahaan/instansi/lembaga yang Bapak/Ibu pimpin, maka kami mohon bantuan untuk dapat memberikan nilai sesuai dengan format terlampir dengan standar nilai berikut ini :

Nilai Angka	Nilai Mutu
91 - 100	A
81-90	B
71-80	C
< 70	D

Atas bantuan dan kerjasama yang baik kami mengucapkan terima kasih.

Cirebon, 15 September 2021
Ketua Program Studi
Teknik Informatika

Cucu Handayani, M.Kom
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Surat Penilaian Observasi (Lanjutan)

SEKOLAH TINGGI ILMU KOMPUTER
STIKOM
POLTEK

Lampiran Surat Nomor : 0538/SPNOTA/STIKOMPOLTEK/S1/TI/IX/2021

DAFTAR PENILAIAN OBSERVASI TUGAS AKHIR

Kami menyatakan bahwa mahasiswa/i yang namanya tercantum di bawah ini telah selesai melaksanakan Observasi Tugas Akhir pada Radar Cirebon Cirebon :

NRP	Nama	Nilai	Mutu
14517408	Danny Fachrul Aliansyah Nurdin	92	A

Cirebon, 16 September 2021

(Yuda Sanjaya)

YAYASAN
Jl. Taman Wahidin Kav.15 Cirebon (0231) 484005
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Homepage : www.stikompoltek.ac.id

Surat Balasan Observasi

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Nomor: 015/PIMRED-RADARCIREBON.COM/IX/2021
Perihal : Observasi

Kepada YTH
Ketua Prodi Teknik Informatika
STIKOM Poltek Cirebon

Dengan Hormat
Bersama ini, disampaikan bahwa mahasiswa Program Studi Teknik Informatika atas nama Danny Fachrul Aliansyah Nurdin NRP 14517408, telah melaksanakan observasi penelitian di Radar Cirebon.

Adapun judul penelitian tersebut adalah Metode Local Binary Pattern Histogram (LBPH) Pengenalan Wajah pada Sistem Absensi Online Karyawan Radar Cirebon.

Penelitian berlangsung pada 15 September sampai dengan 24 September 2021.

Demikian surat ini disampaikan, agar dapat digunakan sebagaimana mestinya. Atas perhatian dan kerjasamanya kami sampaikan terima kasih.

Cirebon, 21, September 2021

Yuda Sanjaya
(Pemimpin Redaksi Radar Cirebon Online)

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E-mail: redaksi@radarcirebon.com Website: http://www.radarcirebon.com

Daftar Hadir Sidang

Kartu Bimbingan Skripsi Bagian Depan

Kartu Bimbingan Skripsi Bagian Belakang

Lampiran B Kode Program

Kode Program Membuat Dataset

```
import cv2
import os
import numpy as np
import time
import matplotlib.pyplot as plt
import sys
import argparse as arg
class Train():

    def __init__(self, face_cascade,config,username):
        self.username = username
        # self.current_dir = current_dir
        self._Face_Cascade =
cv2.CascadeClassifier(face_cascade)
        self.dataset_path("dataset/")
        self.recognizer =
cv2.face.LBPHFaceRecognizer_create(config[0], config[1],
config[2], config[3],config[4])
    def dataset_path(self, path):
        dir = os.path.dirname(path)
        if not os.path.exists(dir):
            os.makedirs(dir)
    def ReadName(self):
        NAME = []
        with open ("users.txt", "r") as f:
            for line in f:
                NAME.append(line.split(",")[1].rstrip())
        return NAME
    def AddUser(self):
        # Name = input('\n[INFO] Masukan nama user : ')
        Name = self.username
        info = open('users.txt', "a+")
        ID = len(open("users.txt").readlines(  ))
        info.write(str(ID) + "," + Name + "\n")
        print("\n[INFO] Tambah user berhasil, ID:" + str(ID))
        info.close
        return ID
    def getImageWithLabels(self,path):
        imagePaths = [os.path.join(path, f) for f in
os.listdir(path)]
        faceSamples = []
        ids = []
        for imagePath in imagePaths:
            img = cv2.imread(imagePath, 0)
            img_numpy = np.array(img, 'uint8')
            id = int(os.path.split(imagePath)[-
1].split('.')[1])
```

```
            faceSamples.append(img_numpy)
            ids.append(id)
        return faceSamples, ids
    def train(self, path, file_name):
        # os.chdir('tmp')
        # real_path = '{0}/{1}'.format(self.current_dir,path)
        print("\n[INFO] Training wajah sedang dimulai...")
        time.sleep(1)
        faces, ids = self.getImageWithLabels(path)
        self.recognizer.update(faces,np.array(ids))
        self.recognizer.write(file_name)
        print("\n[INFO] Model sukses melatih  user ID:
{0}".format(len (np.unique (ids))))
        print("\n[INFO] Menutup program")
        return len(np.unique (ids))
    def create_Rect(self, Image, face, color):
        x,y,w,h = face
        cv2.line(Image, (x, y), (int(x + (w/5)),y), color, 2)
        cv2.line(Image, (int(x+((w/5)*4)), y), (x+w, y),
color, 2)
        cv2.line(Image, (x, y), (x,int(y+(h/5))), color, 2)
        cv2.line(Image, (x+w, y), (x+w, int(y+(h/5))), color,
2)
        cv2.line(Image, (x, int(y+(h/5*4))), (x, y+h), color,
2)
        cv2.line(Image, (x, int(y+h)), (x + int(w/5) ,y+h),
color, 2)
        cv2.line(Image, (x+int((w/5)*4), y+h), (x + w, y +
h), color, 2)
        cv2.line(Image, (x+w, int(y+(h/5*4))), (x+w, y+h),
color, 2)

    def createDataset(self,samples,cam,dataset_name):
        fig, axs = plt.subplots(10,5,figsize=(20,20),
facecolor='w', edgecolor='k')
        fig.subplots_adjust(hspace=.5, wspace=.001)
        self.dataset_path(dataset_name)
        count = 0
        face_id = self.AddUser()
        print('\n[INFO] Membuat dataset')
        while(True):
            success, image = cam.read()
            # convert image to grayscale
            gray = cv2.cvtColor(image, cv2.COLOR_BGR2GRAY)
            faces = self._Face_Cascade.detectMultiScale(gray,
scaleFactor = 1.098, minNeighbors = 6, minSize = (50, 50))
            if(len(faces)> 1):
                print('\n[WARNING] Terdeteksi lebih dari 1
wajah')
                continue
            try:
                for _,face in enumerate(faces):
                    x, y, w, h = face
```

```
                    gray_chunk = gray[y-30: y + h + 30, x-30:
x + w + 30]
                    image_chunk = image[y: y + h, x: x + w]
                    self.create_Rect(image, face, [0,255,0])
                    # cv2.imshow("Video", image)
                    #get center image
                    # image_center =
tuple(np.array(gray_chunk.shape) / 2)
                    # rot_mat =
cv2.getRotationMatrix2D(image_center, angle_degree, 1.0)
                    # rotated_image =
cv2.warpAffine(gray_chunk, rot_mat, gray_chunk.shape,
flags=cv2.INTER_LINEAR)
                    print("\n[INFO] Adding image number {} to
the dataset".format(count))
                    # Save image
                    cv2.imwrite("dataset/User." +
str(face_id) + '.' + str(count) + ".jpg " ,
                        image)

axs[int(count/5)][count%5].imshow(image,cmap='gray', vmin=0,
vmax=255)

axs[int(count/5)][count%5].set_title("Person." + str(face_id)
+ '.' + str(count) + ".jpg ",
                        fontdict={'fontsize':
15,'fontweight': 'medium'})
                    axs[int(count/5)][count%5].axis('off')
                    count += 1
            except Exception as e:
                print(e)
                print('[WARNING] Ada error')
                continue
            if cv2.waitKey(1) & 0xff == 27:
                break
            elif count >= samples:
                break
        print('\n[INFO] Dataset berhasil dibuat')
        # cam.release()
        # cv2.destroyAllWindows()
        # plt.show()
def Arg_Parse():
     Arg_Par = arg.ArgumentParser()
     Arg_Par.add_argument("-v", "--video",
                          help = "path of the video or if
not then webcam")
     Arg_Par.add_argument("-c", "--camera",
                          help = "Id of the camera")
     arg_list = vars(Arg_Par.parse_args())
     return arg_list
if __name__ == "__main__":
    if len(sys.argv) == 1:
        print("Masukan argumen yang valid!")
        sys.exit()
```

```
    Arg_list = Arg_Parse()
    face_cascade = 'lib/haarcascade_frontalface_default.xml'
    if not (os.path.isfile(face_cascade)):
        raise RuntimeError("%s: not found" % face_cascade)
    samples = 2
    dataset_name = 'dataset/'
    file_name = 'train.yml'
    radius = 1
    neighbour = 8
    grid_x = 8
    grid_y = 8
    treshold = 450
    var = list([radius,neighbour,grid_x,grid_y,treshold])
    model = Train(face_cascade,var)
    if Arg_list["video"] != None :
        video = cv2.VideoCapture(Arg_list["video"])
        #create a dataset for further model training
        print('{0} {1}
{2}'.format(samples,video,dataset_name))
        model.createDataset(samples,video,dataset_name)
        #Training the model
        model.train(dataset_name,file_name)
    if Arg_list["camera"] != None :
        camera = cv2.VideoCapture(eval(Arg_list["camera"]))
        camera.set(3, 640)
        camera.set(4, 480)
        model.createDataset(samples,camera,dataset_name)
        #Training the model
        model.train(dataset_name,file_name)
```

Kode Program Membuat Model

```
import numpy as np
import cv2
import os
#Face detection is done
def faceDetection(test_img):
    gray_img=cv2.cvtColor(test_img,cv2.COLOR_BGR2GRAY)

face_haar=cv2.CascadeClassifier('haarcascade_frontalface_defa
ult.xml')
    faces=face_haar.detectMultiScale(gray_img,
scaleFactor=1.2,
        minNeighbors=4,
        minSize=(30, 30))
    return faces,gray_img
# labeling dataset
def labels_for_training_data(directory):
    faces=[]
    faceID=[]
    file_count = 0
    for path,subdirnames,filenames in os.walk(directory):
        for filename in filenames:
            if filename.startswith("."):
                print("skipping system file")
                continue
            file_count += 1
            print(f'{filename} with id:
{filename.split(".")[1]}')
            id = filename.split(".")[1]
            image = cv2.imread(f'dataset/{filename}')
            if image is None:
                print(f'{filename} not exist!')
                continue
            faces_rect,gray_img=faceDetection(image)
            if len(faces_rect)!=1:
                print(f'{filename} -> no/multiple face
detected')

                continue
            (x,y,w,h)=faces_rect[0]
            tiny_face=gray_img[y:y+w,x:x+h]
            faces.append(tiny_face)

            faceID.append(int(id))
    print(f'{file_count=}')
    return faces,faceID
#Here training Classifier is called
def train_classifier(faces,faceID):
    face_recognizer=cv2.face.LBPHFaceRecognizer_create()
    face_recognizer.train(faces,np.array(faceID))

face_recognizer.write(f'{os.path.dirname(os.path.realpath(__f
ile__))}/model.yml')
```

```
    return face_recognizer
#Drawing a Rectangle on the Face Function
def draw_rect(test_img,face):
    (x,y,w,h)=face

cv2.rectangle(test_img,(x,y),(x+w,y+h),(0,255,0),thickness=3)
#Putting text on images
def put_text(test_img,text,x,y):

cv2.putText(test_img,text,(x,y),cv2.FONT_HERSHEY_DUPLEX,3,(25
5,0,0),6)
```

Kode Program Pengenalan Wajah

```
import cv2
import numpy as np
import csv
import os
import logging
logging.basicConfig(filename='predict.log',
format='%(asctime)s %(levelname)-8s
%(message)s',level=logging.DEBUG, datefmt='%Y-%m-%d
%H:%M:%S')
# global recognizer = cv2.face.LBPHFaceRecognizer_create()
# recognizer.read('train.yml')
# global faceCascade =
cv2.CascadeClassifier('haarcascade_frontalface_default.xml')
# global font = cv2.FONT_HERSHEY_SIMPLEX
class Predict():
    def __init__(self, image):
        self.image = image
        # self.recognizer =
cv2.face.LBPHFaceRecognizer_create()
        # self.recognizer.read('train.yml')
        # self.faceCascade =
cv2.CascadeClassifier('haarcascade_frontalface_default.xml')
        # self.font = cv2.FONT_HERSHEY_SIMPLEX
    def print(self):
        return os.path.join('dataset', self.image)
    def predict(self):
        logging.info('-----------------------------')
        logging.info('Predict Start')
        # print(self.image)
        # print(os.path.join('dataset', self.image))
        # print('{} '.format(self.image))
        # logging.info('{}'.format(os.path.join('dataset',
self.image)))
        # logging.info('{}'.format('dataset/{}
'.format(self.image)))

        # img = cv2.imread('image/59b53e2d-0c03-44ec-a4a9-
23d496caf6e0.jpg')
        img = cv2.imread(str(self.image))
        # img = cv2.imread(os.path.join('dataset',
self.image)+ " ")



        logging.info('Recognizer start')
        recognizer = cv2.face.LBPHFaceRecognizer_create()
        recognizer.read('model.yml')
        faceCascade =
cv2.CascadeClassifier('haarcascade_frontalface_default.xml')
```

```
        font = cv2.FONT_HERSHEY_SIMPLEX
        ID = None
        CONF = None
        ### resize image
        imgs = cv2.resize(img,(0,0),None,0.25,0.25)
        # convert to gray scale
        gray = cv2.cvtColor(imgs, cv2.COLOR_BGR2GRAY)
        ### detect the face
        faces =
faceCascade.detectMultiScale(gray,scaleFactor=1.05,minNeighbo
rs=4,minSize=(30, 30))
        treshold = cv2.face_LBPHFaceRecognizer.getThreshold
        print(treshold)
        for (x,y,w,h) in faces:
            Id,conf = recognizer.predict(gray[y:y+h,x:x+w])
            # cv2.rectangle(imgS, (x,y), (x+w, y+h),
(255,0,0), 2)
            # cv2.rectangle(img, (x, y), (x + w, y + h), (0,
260, 0), 2)
            # cv2.putText(imgS, str(Id), (x,y-40),font, 2,
(255,255,255), 3)
            print('ID {0}, confidence {1}'.format(Id, conf))
            ID = Id
            CONF = conf
        logging.info('Predict result: {} with {}
distance'.format(ID, CONF))
        print('ID {0}, confidence {1}'.format(ID, CONF))
        return ID,CONF
```

Kode Program Server Pengenalan Wajah

```
from flask import Flask, request, make_response
from flask_cors import CORS
from file_downloader import downloader, getData, updateData,
updateDataNew, putData
import cv2
from train import Train
from predict import Predict
import uuid
import os
import datetime
import json
import logging
import math
import recognize as re
logging.basicConfig(filename='skripsi.log',
format='%(asctime)s %(levelname)-8s %(message)s',
level=logging.INFO, datefmt='%Y-%m-%d %H:%M:%S')
app = Flask(__name__)
cors = CORS(app, resources={r"/*": {"origins": "*"}})
@app.route('/')
def test():
    current_time =  datetime.datetime.now()
    response = make_response('<h1>Success at {} (server
time)</h1>'.format(current_time))
    response.headers['Content-Security-Policy'] = 'upgrade-
insecure-requests'
    return response
@app.route('/recognize/predict', methods=['POST'])
def predict():
    logging.info('halo')
    request_data = request.get_json()


    if request_data:
        image = request_data['image']
        expect_username = request_data['username']
        location = request_data['location']
        username = None
        conf = None

        debug_id = None
        debug_sim = None
        debug_dis = None
        debug_username = None
        result_id = None
        result_sim = None
        result_dis = None
        result_username = None
        debug_user_data = None
```

```
        result_user_data = None
        minSim = 40 # 75%

        image_path = 'image/{}.jpg'.format(uuid.uuid4())
        # download video from s3
        downloader_client =
downloader(key=image,bucket='dannynurdin',
destination=image_path)
        downloader_client.download()

        model = Predict(image_path)

        res = model.print()
        id,c = model.predict()
        logging.info('DATA => id from model == ', id)
        print('DATA => id from model == ', id)
        logging.info('success {} - {}'.format(id, c))
        if c:
            disMax = 450.0
            simMax = 100
            similarity  = simMax - simMax/disMax*c
            conf = similarity


        with open('users.txt') as f:
            datafile = f.readlines()
            for line in datafile:
                Id = line.split(',')[0]
                print('DATA => Id from model == ', Id)
                logging.info('DATA => Id from model == ', Id)
                if Id == id:
                    dump= line.split(',')[1]
                    debug_username = dump.split('\n')[0]
                    debug_id = id
                    debug_sim = conf
                    debug_dis = c

                    dynamodb_client = getData(id =
debug_username)
                    debug_response = dynamodb_client.get()
                    debug_user_data = debug_response['Item']
or None
                    # add record to database test-v2
                    record = putData(id =
debug_username,face_id=debug_id,conf=debug_sim,location='test
location')
                    record.put()

                    if conf and conf >= minSim:
                        result_username = dump.split('\n')[0]
                        result_sim = conf
                        result_id = id
                        result_dis = c
```

```
                        dynamodb_client = getData(id =
result_username)
                        result_response =
dynamodb_client.get()
                        result_user_data =
result_response['Item'] or None


        response = make_response({
            "debug": {
                "id": debug_id,
                "dis": debug_dis,
                'sim': debug_sim,
                "username": debug_username,
                "user_data": debug_user_data,
                'expect_user': expect_username
            },
            'result': {
                "username": result_username,
                "dis": result_dis,
                "sim": result_sim,
                "id": result_id,
                "user_data": result_user_data
            },

        })
        response.headers['Content-Security-Policy'] =
'upgrade-insecure-requests'
        return response

    return 'kosong'
@app.route('/recognize/train', methods=['POST'])
def train():
    # grab data from post request
    request_data = request.get_json()
    key = None
    username = None
    # config
    face_cascade = 'lib/haarcascade_frontalface_default.xml'
    dataset_name = 'dataset/'
    samples = 15
    file_name = 'model.yml'
    video_path = 'video/{}.mp4'.format(uuid.uuid4())


    # LBPH variables
    radius = 1
    neighbour = 8
    grid_x = 8
    grid_y = 8
    treshold = 450
    var = list([radius,neighbour,grid_x,grid_y,treshold])
    if request_data:
        if 'key' in request_data:
```

```
            key = request_data['key']

        if 'username' in request_data:
            username = request_data['username']
        if 'from' in request_data:
            status = request_data['from']
        if status =='development':
            bucket_name = 'skripsi200053-dev'
        else:
            bucket_name =  'skripsi132739-prod'

        # download video from s3
        downloader_client =
downloader(key=key,bucket=bucket_name,
destination=video_path)
        downloader_client.download()
        # get data user
        dynamodb_client = updateData(id = username, key =
key)
        ress = dynamodb_client.update()
        print(ress)
        # start recognize using opencv
        model = Train(face_cascade,var,username) # create
instance train
        video = cv2.VideoCapture(video_path) # load video
        model.createDataset(samples,video,dataset_name) #
create dataset
        # id = model.train(dataset_name,file_name)
        faces,faceID = re.labels_for_training_data('dataset')
        face_recognizer=re.train_classifier(faces,faceID)

face_recognizer.save(f'{os.path.dirname(os.path.realpath(__fi
le__))}/model.yml')
        print(f'faces: {len(faces)} , id: {len(faceID)}')
        response = {
            "success": True,
            "face_id": id,
            "username": username
        }
        response = make_response({
            "success": True,
            "face_id": id,
            "username": username
        })
        response.headers['Content-Security-Policy'] =
'upgrade-insecure-requests'
        return response
    else:
        return 'Key required!'
@app.route('/update', methods=['POST'])
def update():
    request_data = request.get_json()
    AttrName = {}
    AttrValue = {}
```

```
    Expression = []
    if request_data:
        if 'id' in request_data:
            id = request_data['id']

        if 'name' in request_data:
            # key = request_data['name']
            AttrName['#N'] = 'name'
            AttrValue[':N'] = { 'S' : request_data['name']}
            Expression.append('#N = :N')
        if 'phone' in request_data:
            # status = request_data['phone']
            AttrName['#P'] = 'phone_number'
            AttrValue[':P'] = { 'S' : request_data['phone']}
            Expression.append('#P = :P')
        if 'address' in request_data:
            # status = request_data['address']
            AttrName['#A'] = 'address'
            AttrValue[':A'] = { 'S' :
request_data['address']}
            Expression.append('#A = :A')

    expression = 'Set ' + ','.join([str(elem) for elem in
Expression])
    dynamodb_client = updateDataNew(id)
    ress = dynamodb_client.update(AttrName,AttrValue,
expression)
    response = make_response({
            "res": request_data,
            'AttrName': json.dumps(AttrName),
            'AttrValue': json.dumps(AttrValue),
            'Expression': expression

        })
    response.headers['Content-Security-Policy'] = 'upgrade-
insecure-requests'
    return response
if __name__ == '__main__':
    # run app in debug mode on port 5000
    app.run(host='0.0.0.0.0',port=80)
```

Lampiran C Data Pengujian

Hasil Pengujian Gambar Acak

Pengujian ke	Id Pengguna	Hasil prediksi	Jarak	Prediksi
1	Tidak diketahui	1	89	Salah
2	Tidak diketahui	1	113	Salah
3	Tidak diketahui	-	-	benar
4	2	2	121	Benar
5	1	1	97	Benar
6	Tidak diketahui	1	78	Salah
7	1	1	76	Benar
8	2	2	117	Benar
9	1	-	-	Salah
10	Tidak diketahui	1	83	Salah
11	1	-	-	Salah
12	2	2	85	Benar
13	1	1	95	Benar
14	1	1	110	Benar
15	1	1	118	Benar
16	1	1	111	Benar
17	2	2	76	Benar
18	Tidak diketahui	1	89	salah
19	1	1	167	Benar
20	2	2	125	Benar
21	2	2	117	Benar
22	1	1	109	Benar
23	1	0	163	Benar
24	1	-	-	Salah
25	Tidak diketahui	1	84	Salah
26	Tidak diketahui	1	117	Salah
27	Tidak diketahui	2	108	Salah
28	2	2	159	Benar
29	2	2	85	Benar
30	1	1	122	Benar

Hasil pengujian Gambar Acak (Lanjutan)

Pengujian ke	Id Pengguna	Hasil prediksi	Jarak	Prediksi
31	1	-	-	Salah
32	1	1	116	Benar
35	2	2	113	Benar
36	2	2	96	Benar
37	1	1	90	Benar
38	1	1	79	Benar
39	2	2	122	Benar
40	Tidak diketahui	1	143	Salah
41	1	-	-	Salah
42	1	1	82	Benar
43	1	1	79	Benar
44	Tidak diketahui	1	66	Salah
45	1	-	-	Salah
46	1	1	111	Benar
47	1	-	-	Salah
48	Tidak diketahui	1	65	Salah
49	Tidak diketahui	1	89	Salah
50	Tidak diketahui	1	132	Salah

Hasil Pengujian Dengan Id Diketahui

Pengujian ke	Id Pengguna	Hasil prediksi	Jarak	Prediksi
1	2	2	121	Benar
2	1	1	97	Benar
3	1	1	76	Benar
4	2	2	117	Benar
5	1	-	-	Salah
6	1	-	-	Salah
7	2	2	85	Benar
8	1	1	95	Benar
9	1	1	110	Benar
10	1	1	118	Benar
11	1	1	111	Benar
12	2	2	76	Benar
13	1	1	167	Benar
14	2	2	125	Benar
15	2	2	117	Benar
16	1	1	109	Benar
17	1	0	163	Benar
18	1	-	-	Salah
19	2	2	159	Benar
20	2	2	85	Benar
21	1	1	122	Benar
22	1	-	-	Salah
23	1	1	116	Benar
24	1	-	-	Salah
25	1	1	77	Benar
26	2	2	113	Benar
27	2	2	96	Benar
28	1	1	90	Benar
29	1	1	79	Benar
30	2	2	122	Benar
31	1	-	-	Salah
32	1	1	82	Benar
33	1	1	79	Benar
34	1	-	-	Salah
35	1	1	111	Benar
36	1	-	-	Salah

Hasil pengujian Muka Senyum

No	Id Pengguna	Hasil Prediksi	Jarak	Prediksi
1	1	1	110	Benar
2	1	1	111	Benar
3	1	1	109	Benar
4	1	1	122	Benar
5	1	1	116	Benar
6	1	-	-	Salah
7	1	1	90	Benar
8	1	1	79	Benar
9	1	-	-	Salah
10	1	-	-	Salah
11	1	1	112	Benar
12	1	1	103	Benar
13	1	1	100	Benar
14	1	1	118	Benar
15	1	1	114	Benar
16	1	-	-	Salah
17	1	1	81	Benar
18	1	1	68	Benar
19	1	-	-	Salah
20	1	-	-	Salah

Hasil pengujian Muka Datar

No	Id Pengguna	Hasil Prediksi	Jarak	Prediksi
1	1	1	76	Benar
2	1	-	-	Salah
3	1	1	95	Benar
4	1	1	163	Benar
5	2	2	85	Benar
6	1	1	77	Benar
7	2	2	113	Benar
8	2	2	96	Benar
9	1	1	79	Benar
10	1	-	-	Salah
11	1	1	88	Benar
12	1	1	152	Benar
13	2	2	81	Benar
14	1	1	66	Benar
15	2	2	102	Benar
16	2	2	82	Benar
17	1	1	69	Benar
18	2	2	111	Benar
19	2	2	92	Benar
20	1	-	-	Salah