# IOT – SMART FARMING

**ASSIGNMENT 3: PYTHON CODE FOR BLINKING LED AND TRAFFIC LIGHT RENO:610819205015**

# JACKSON J PROGRAM:

import cv2 import sys import os

def find\_traffic\_sign(main\_images\_path,selected\_images\_path, threshold=0.1):

MIN\_MATCH\_COUNT = 10

# Initialize SIFT detector

sift = cv2.xfeatures2d.SIFT\_create(contrastThreshold=threshold) for selected\_image in os.listdir(selected\_images\_path):

img1 = cv2.imread(os.path.join(selected\_images\_path,selected\_image)) match\_check=False

for main\_image in os.listdir(main\_images\_path):

img2 = cv2.imread(os.path.join(main\_images\_path,main\_image)) kp1, des1 = sift.detectAndCompute(img1, None)

kp2, des2 = sift.detectAndCompute(img2, None)

FLANN\_INDEX\_KDTREE = 0

index\_params = dict(algorithm=FLANN\_INDEX\_KDTREE, trees=5) search\_params = dict(checks=50)

flann = cv2.FlannBasedMatcher(index\_params, search\_params) matches = flann.knnMatch(des1, des2, k=2)

good = []

for m, n in matches:

if m.distance < 0.1 \* n.distance:

good.append(m)

if len(good) > MIN\_MATCH\_COUNT:

match\_check=True

img1 = cv2.putText(img1, main\_image, (0,50), cv2.FONT\_HERSHEY\_SIMPLEX, 0.80, (0,255,255), print("Match found: "+str(len(good))+ " common keypoints are found between "

+selected\_image+" and "+main\_image) break

if match\_check==False : print("Match not found")

cv2.imshow('img1', img1) cv2.waitKey(0)

if \_name\_ == '\_main\_': find\_traffic\_sign(\*sys.argv[1:])