import numpy as np

import RPi.GPIO as GPIO

import datetime

import time

WL=[-2.25410598e-03, 1.11667167e+00, 2.31076908e+01]

WR=[-1.86278271e-03, 8.45057718e-01, 5.70439913e+01]

TRIG=29

ECHO=31

VL=12

VR=36

GPIO.setmode(GPIO.BOARD)

GPIO.setwarnings(False)

GPIO.setup(TRIG,GPIO.OUT)

GPIO.setup(ECHO,GPIO.IN)

GPIO.setup(VL,GPIO.OUT)

GPIO.setup(VR,GPIO.OUT)

VL1=GPIO.PWM(VL,50)

VR1=GPIO.PWM(VR,50)

VL1.start(0)

VR1.start(0)

def ultrasonic():

GPIO.output(TRIG,False)

time.sleep(0.0002)

GPIO.output(TRIG,True)

time.sleep(0.00001)

GPIO.output(TRIG,False)

while GPIO.input(ECHO)==0:

pulse\_start=time.time()

while GPIO.input(ECHO)==1:

pulse\_end=time.time()

pulse\_duration=pulse\_end-pulse\_start

distance=pulse\_duration\*17150

distance=int(round(distance,2))

if distance>400:

distance=400

return distance

i=1

while i==1:

s=ultrasonic()

s = [s\*\*2,s,1]

s = np.array(s)

print(s)

Yx = s.dot(WL)

Yy=s.dot(WR)

if(Yx>20):

Y1=Yx

else:

Y1=20

if(Yy>20):

Y2=Yy

else:

Y2=20

if(Yx>100):

Y1=100

else:

Y1=Yx

if(Yy>100):

Y2=100

else:

Y2=Yy

VL1.ChangeDutyCycle(Y1)

VR1.ChangeDutyCycle(Y2)