SafePack: Python Code

#!/usr/bin/env python3

import RPi.GPIO as GPIO

import time

ObstaclePin = 18 # GPIO24 for IR

motor\_pin = 16 # GPIO23 for vibrating motor

tilt\_switch\_pin = 11 # GPIO17 for tilt switch

buzzer\_pin = 12 # GPIO18 for buzzer

GPIO.setmode(GPIO.BOARD)

GPIO.setup(ObstaclePin, GPIO.IN, pull\_up\_down=GPIO.PUD\_UP)

GPIO.setup(motor\_pin, GPIO.OUT)

GPIO.setup(tilt\_switch\_pin, GPIO.IN, pull\_up\_down=GPIO.PUD\_DOWN)

GPIO.setup(buzzer\_pin, GPIO.OUT)

def loop():

while True:

# obstacle detection

if (GPIO.input(ObstaclePin) == 0) and not (GPIO.input(tilt\_switch\_pin) == GPIO.LOW):

GPIO.output(motor\_pin, GPIO.HIGH)

print("Detected Barrier!, Motor ON!!")

else:

GPIO.output(motor\_pin, GPIO.LOW)

# tilt switch detection

if GPIO.input(tilt\_switch\_pin) == GPIO.LOW and not (GPIO.input(ObstaclePin) == 0):

print("Tilt switch triggered!")

GPIO.output(buzzer\_pin, GPIO.LOW)

time.sleep(0.5)

else:

GPIO.output(buzzer\_pin, GPIO.HIGH)

if (GPIO.input(ObstaclePin) == 0) and (GPIO.input(tilt\_switch\_pin) == GPIO.LOW):

print("Both Obstacle and Tilt Detected")

GPIO.output(buzzer\_pin, GPIO.LOW)

time.sleep(0.5)

GPIO.output(buzzer\_pin, GPIO.HIGH)

time.sleep(0.5)

else:

GPIO.output(motor\_pin, GPIO.LOW)

GPIO.output(buzzer\_pin, GPIO.HIGH)

def destroy():

GPIO.cleanup()