**GPIO pin assignments for KESBOT3**

GPIO.setmode(GPIO.BCM) # use BCM numbering for GPIO inputs and outputs

GPIO.setwarnings(False) # switch off warnings about pins in use

# line sensors

GPIO.setup(19, GPIO.IN) # set left line sensor input on physical pin 35

GPIO.setup(16, GPIO.IN) # set middle line sensor input on physical pin 36

GPIO.setup(20, GPIO.IN) # set right line sensor input on physical pin 38

# motor direction

GPIO.setup(14, GPIO.OUT) # for motor A direction on physical pin 8

GPIO.setup(15, GPIO.OUT) # for motor A direction on physical pin 10

GPIO.setup(18, GPIO.OUT) # for motor B direction on physical pin 12

GPIO.setup(27, GPIO.OUT) # for motor B direction on physical pin 13

# motor PWM outputs

GPIO.setup(04, GPIO.OUT) # PWM for motor A on physical pin 7

GPIO.setup(17, GPIO.OUT) # PWM for motor B on physical pin 11

# ultrasonic sensor

GPIO.setup(08, GPIO.IN) # signal back from ultrasonic sensor or physical pin 24

GPIO.setup(11, GPIO.OUT) # trigger signal to ultrasonic sensor on physical pin 23

# on board LEDs

GPIO.setup(05, GPIO.OUT) # for LED0 on physical pin 29

GPIO.setup(06, GPIO.OUT) # for LED1 on physical pin 31

GPIO.setup(13, GPIO.OUT) # for LED2 on physical pin 33

# RBG board LEDs

GPIO.setup(22, GPIO.OUT) # for RGB1 on physical pin 15

GPIO.setup(23, GPIO.OUT) # for RGB1 on physical pin 16

GPIO.setup(24, GPIO.OUT) # for RGB1 on physical pin 18

# Reuse RGB2 to get 3 switch inputs

GPIO.setup(10, GPIO.IN) # for RGB2 on physical pin 19

GPIO.setup(09, GPIO.IN) # for RGB2 on physical pin 21

GPIO.setup(25, GPIO.IN) # for RGB2 on physical pin 22

# WS2812 LED string

GPIO.setup(12, GPIO.OUT) # for WS2812 on physical pin 32

# I2C to PCA9685 for up to 16 servos or LEDs

# I2C to 2 line x 16 character LCD display

GPIO.setup(02, GPIO.OUT) # for SDA1 on physical pin 3

GPIO.setup(03, GPIO.OUT) # for SCL1 on physical pin 5

# push button and 1 switch

GPIO.setup(07, GPIO.IN) # push button on physical pin 26

GPIO.setup(21, GPIO.IN) # switch 4 on physical pin 40