**Working Ultrasonic motion detector using esp8266**

Program:-

// Define pin connections  
#define TRIGGER\_PIN D1 // Pin connected to the trigger pin of ultrasonic sensor  
#define ECHO\_PIN D2    // Pin connected to the echo pin of ultrasonic sensor  
  
void setup() {  
  Serial.begin(9600);  
  pinMode(TRIGGER\_PIN, OUTPUT);  
  pinMode(ECHO\_PIN, INPUT);  
}  
  
void loop() {  
  // Triggering the ultrasonic sensor to send out a pulse  
  digitalWrite(TRIGGER\_PIN, LOW);  
  delayMicroseconds(2);  
  digitalWrite(TRIGGER\_PIN, HIGH);  
  delayMicroseconds(10);  
  digitalWrite(TRIGGER\_PIN, LOW);  
   
  // Reading the time it takes for the pulse to return  
  long duration = pulseIn(ECHO\_PIN, HIGH);  
   
  // Calculating distance based on the speed of sound  
  // (speed of sound is approximately 343 meters per second or 0.0343 cm/microsecond)  
  float distance\_cm = duration \* 0.0343 / 2;  
   
  // Printing the distance to the Serial Monitor  
  Serial.print("Distance: ");  
  Serial.print(distance\_cm);  
  Serial.println(" cm");  
  
  delay(1000); // Adjust delay according to your requirement  
}