**Software code**

#define trigPin 9

#define echoPin 10

#define motor1A 2

#define motor1B 3

#define motor2A 4

#define motor2B 5

void setup() {

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);

pinMode(motor1A, OUTPUT);

pinMode(motor1B, OUTPUT);

pinMode(motor2A, OUTPUT);

pinMode(motor2B, OUTPUT);

Serial.begin(9600);

}

void loop() {

// Measure distance

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

long duration = pulseIn(echoPin, HIGH);

int distance = duration \* 0.034 / 2;

// Obstacle avoidance logic

if (distance < 300) {

// Stop motors

digitalWrite(motor1A, LOW);

digitalWrite(motor1B, LOW);

digitalWrite(motor2A, LOW);

digitalWrite(motor2B, LOW);

} else {

// Move forward

digitalWrite(motor1A, HIGH);

digitalWrite(motor1B, LOW);

digitalWrite(motor2A, HIGH);

digitalWrite(motor2B, LOW);

}

delay(100);

}