

Ardubot - The Maze Runner

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Abstract: *The Avoidance of Obstacles Robot using IoT is a robotic system that is guided by the software we develop and makes use of IoT technologies to avoid obstacles in its route. The robot utilizes sensors to identify obstructions, which it then transmits to a microcontroller, which analyses the information and commands the robot's motors to change course. This kind of robot can be beneficial for a number of tasks, including exploration, search and rescue, and surveillance. The main challenge in building mobile robots is the ability to identify and avoid obstacles. The robots now have the senses necessary to navigate unknown environments safely owing to this technology. This project involves designing an obstacle-avoiding robot that can navigate around obstacles without colliding with them. It is a robot that uses three ultrasonic distance sensors to find obstacles and runs on an Arduino microcontroller. The microcontroller platform chosen was the Arduino board, and the programming was done using Arduino Software, the board's software counterpart. Higher accuracy in spotting nearby impediments is provided by the incorporation of three ultrasonic distance sensors. Being a fully autonomous robot, it navigated new settings without colliding with anything. The project's hardware is widely accessible and reasonably priced, making it simple to replicate the robot.*

Keywords: Autonomous, Colliding, Navigate, Robot, Arduino, obstacle

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