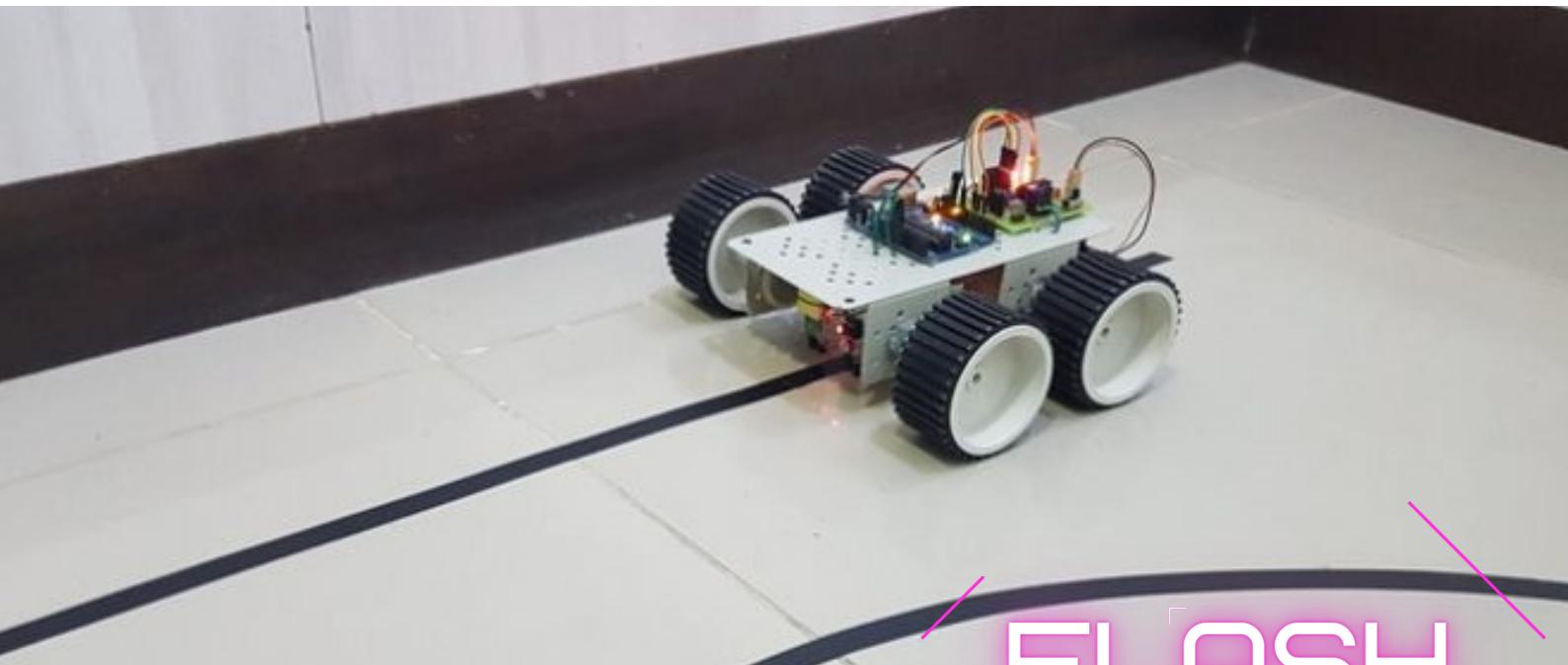


ALPHA SCIENCE LAB

LINE FOLLOWER ROBOT



FLASH

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A mobile robot that can recognize and follow a painted line on the floor is known as a line follower robot. The course is predetermined and can be visible, such as a black line on a white surface with a high contrast color, or invisible, such as a magnetic field. With its infrared ray (IR) sensors positioned beneath the robot, this type of robot should undoubtedly detect the line. Following that, data is sent to the CPU via specialized transition buses. As a result, the CPU will determine the appropriate commands and then send them to the driver, allowing the line follower robot to follow the course.

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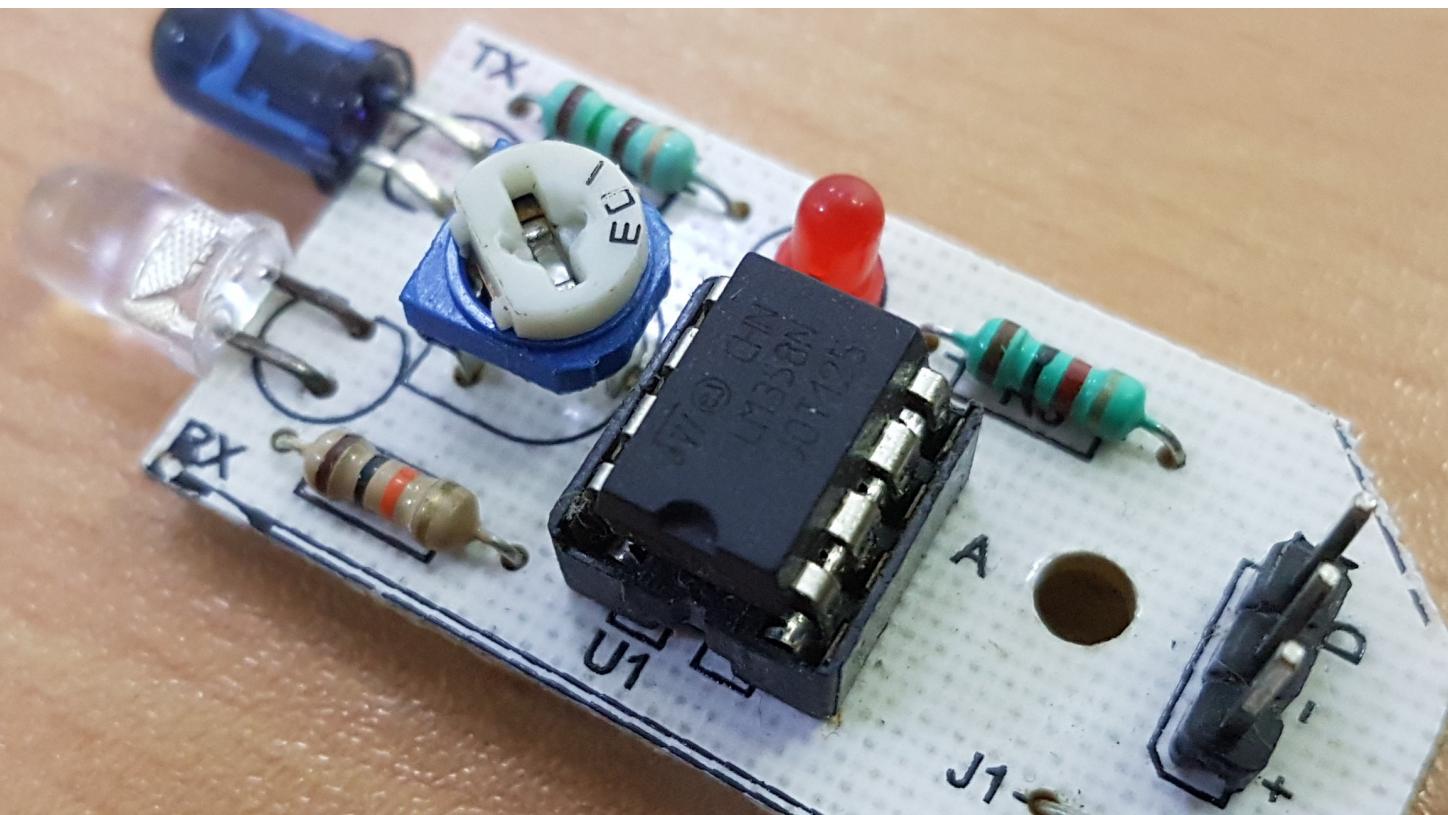
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USES OF LINE FOLLOWER ROBOT

For Guidance: These can be used to give navigation directions in public venues such as shopping malls and museums.

Domestic Uses: These may also be used in the house for cleaning reasons, such as floor cleaning.

Applied to Industry: Conveyor belts can be replaced by these robots as automated equipment carriers in many industries.

Automobile Technology: Line follower robots can be employed in driverless cars with added functionality such as obstacle avoidance and other security precautions.

Advantages of line follower robot

Used in a variety of applications, including household, industrial automation, and military applications.

It is utilized for long-distance applications.

There is no need for a human operator to control the robot's

It is utilized for long-distance applications.

Simplicity of construction

Components Used

Arduino UNO

Motor Driver

Robot Chassis

Geared Motors

IR Sensor

Module

Connecting Wires

Power supply

Battery

Connector

Battery Holder

Black Tape

Conclusion

It is possible to operate a line-following robot without human assistance. As a result, it can be used to replace tedious or time-consuming tasks, as well as labor that is scarce in certain industries (such as medicine) (driving).