LINE TRACER

EVENT DESCRIPTION:

A Line Follower Robot is an automated guided vehicle, which follow a visual line embedded on the floor.

Team Specification:

- The team can have a minimum of 2 members and maximum of 3 members.
- Students from different institutes can be a part of the same team.
- Registration Fee for each Person Rupees 150/-

Event Structure:

- Teams are required to build an autonomous bot that can follow a black line over a contrasting surface.
- Objective is to design and program a robot that follows a black line on a white background on a zig-zag path without losing the line and navigating several 90-degree turns.
- The robot to complete the given path in the shortest period of time while accurately tracking the given path line from start to finish to win.

Criteria for Bots:

- The size of the bot should not be more than 25cm x 25cm x 15cm. Proper care should be taken such that it fits in a box of size 25cm x 25cm x 15cm.
- Only DC-powered components are allowed. However, teams will be provided with an external power source of 220 Volts AC supply for adapters for charging purposes only. Teams are suggested to confine the power source within the bot.
- Teams are allowed to use readymade microcontrollers, an array of LDR, IR, or any other sensor as per their requirement.
- Teams are not allowed to use any ready-made Lego kits or any such assemblies.
- The width of the line to be followed will be 3 cm.

Round 1:

The first task will check the bot's locomotion capabilities. The bot will have to travel a path by following a thick black line.

- The path will consist of curves and the bot will have to reach the checkpoint.
- Participants can score a maximum of 50 points on completion of Round 1.
- 5 points will be deducted for each human interference.
- Points achieved will be inversely proportional to the time taken.

Round 2:

The second level is where the real challenge begins.

- The bot will travel the path to reach its destination following various zig-zag and curved paths. The path to be traversed will be more complicated than Round-1.
- Points will be awarded according to the rules mentioned in the previous round. Participants can score a maximum of 100 points in this round.

Tie-Breaker Rule:

In case of a tie between two or more teams, the time taken to complete the course will be used for breaking the tie. In case of a further tie, other quantitative strategies will be employed.

Rules and Guidelines:

- Each team has to register offline, or online on the official TRISHNA'24 website for the event.
- Only one bot per team is allowed.
- Sharing or exchanging bots with other teams is strictly restricted.
- Explicit physical contact with the bot during the course of the event is not allowed without the organizer's permission. Doing so can lead to a penalty or even disqualification.
- All the participants must be present with their college id-card as well as TRISHNA Id at the time of the event. In case of absence, participation will not be allowed once the event has begun. other college participants must bring a Bonafide Certificate/Letter to participate in this Tech Fest, with your college Principal/HOD signature.

- All participants are required to report 15 min before their allotted slot to the reporting desk, being late will be subjected to disqualification.

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- Any misbehavior of participants during the event may lead to disqualification.
- TRISHNA will not be responsible for any late, lost, or misdirected entries.
- The organizing committee reserves the right to change any of the above rules as they deem fit, at any point in time. However, registered participants will be informed about any changes through email/message/WhatsApp groups.
- **The jury's decision will be final and abiding.**

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