

The Annual Tech-Fest of GEC, Vaishali

VISION'25

13th- 14th Sept 2025

Line Following Robot

OBJECTIVE:

Participants of the Line Following Robot competition are required to build a fast line following robot that is able to follow lines from the start line until the finishing line according to the competition rules. The robot must move autonomously.

TEAM:

- Each team must consist of 2-4 players.
- All players must be students of the same or affiliated institute.
- A Participant cannot be a member of more than one team.
- One team member must act as captain and will be the only point of contact with organizers.



RULES:

1. Robot must be autonomous, starting with a switch.
2. The event is divided into 2 stages, Top 10 teams of stage-1 (arena-I) will qualify for stage-2 (arena-II).
3. Each team will be given 1 try in each arena.
4. Teams will be given 2 minute of setting up time before the start of their game.
5. The robot must reach the finishing line within 5 minutes.
6. Retry is allowed up to three times but the timer will not be stopped. Robot must be placed at checkpoint when retrying. Retry is compulsory every time the robot goes away from the track.
7. Only one team member is allowed to handle the bot in the arena.
8. The team's robot will be inspected before start. Reprogramming or modifying of the robot is not allowed after the setting up time.

TRACK SPECIFICATION:

- The track will be a black line on a white background.
- The line width is typically between 25mm and 35mm.
- The track may include straight paths, curves, intersections, or dead ends.

arena I & II will be announced on event day.



ROBOT SPECIFICATIONS:

- Robot must move autonomously and start with a push button, no manual intervention allowed after the start
- The size of the robot shall not exceed 20cm (length) x 15cm (width) x 15cm (height)
- The total weight of the robot shall not exceed 2kg.
- The robot cannot be split or separated into more than a unit.
- The robot can use sensors (like IR sensors) to detect the line but cannot have any external guidance systems.

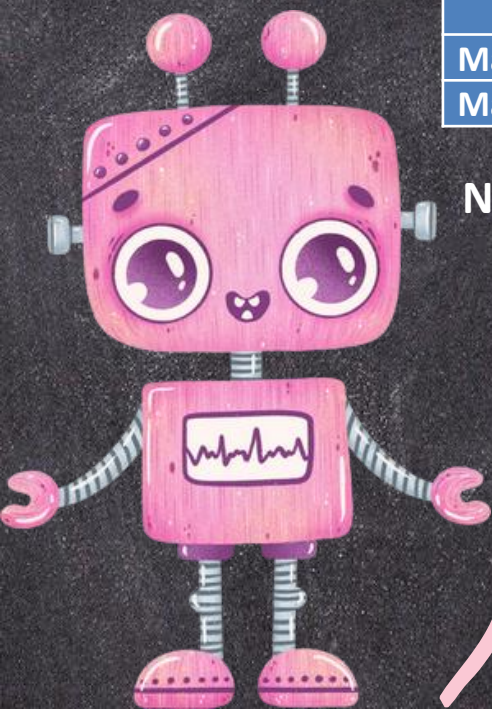
SCORING CRITERIA:

- Robots are often judged based on the time taken to complete the track.
- The timer starts when the robot begins moving and stops when it crosses the finish line.

Penalties:

Situation	Penalty
Leaves line	+5 sec & must restart from checkpoint
Manual restart	+5 sec (only 1 allowed)
Manual push	+5 sec

Note: at a time only one penalty applied.

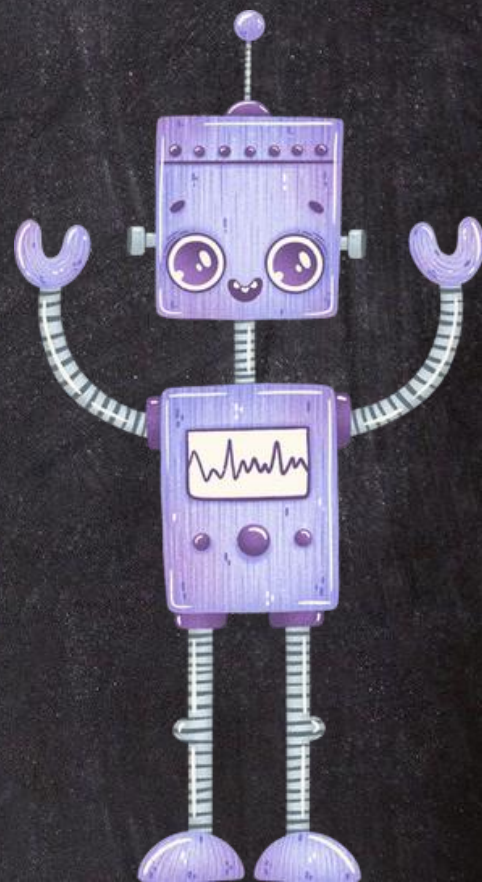


DISQUALIFICATION GROUNDS:

- Team is not present for robot inspection five minutes before the beginning of a match.
- Team's robot does not meet the specifications.
- Team member ruins the game.
- Team member displays unsportsmanlike behaviour.
- The trial time for the disqualified team will be recorded as 5 minutes.

GENERAL INSTRUCTIONS:

- No practice runs on the arena will be allowed.
- Any clarification must be asked before the event starts.
- Judge's decisions will be final and binding.
- Organizers reserve the right to change the rules if required, with prior notice.



WINNING CRITERIA:

- The teams will be ranked based on the team's final (fastest) time.
- In the event of a tie, the team's will be given another tries.

VENUE: BASKETBALL COURT

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