

RULEBOOK

LINE FOLLOWER



ROBOVANZA9.0
2025-26

1. EVENT OVERVIEW

Participants are required to design and build an autonomous robot capable of accurately following a black line on a white surface. The robot must successfully negotiate multiple turns while maintaining continuous line adherence. The objective of the competition is to complete the course in the shortest possible time without deviating from the designated path.

2. TEAM COMPOSITION & ELIGIBILITY

- **Team Composition**

Each team may consist of a maximum of four (4) members. Teams may be formed by participants from the same or different institutions, organizations, or as independent individuals.

- **On-Field Presence**

At any given time, a maximum of two (2) team members are permitted within the playing field. This allowance is strictly for calibration and technical assistance, as permitted by the referees.

- **Eligibility**

All participants must present a valid institutional identity card or official proof of enrollment when requested by the organizers.



3. ROBOT SPECIFICATIONS

- **Autonomy**

The robot shall operate in a fully autonomous mode throughout the competition run. No external control, wireless communication, or manual intervention is permitted once the run has commenced. All hardware and software must be developed solely by the participating team.

- **Size Constraints**

The robot dimensions shall not exceed 30 cm × 30 cm × 30 cm (Length × Width × Height).

- **Weight Constraints**

The total weight of the robot shall not exceed 3 kg, inclusive of all onboard components and batteries.

- **Power Supply**

The robot must be powered by a sealed, immobilized electrolyte battery with an operating voltage not exceeding 12 V DC, with a tolerance of ±5%.

- **Mobility and Movement**

The robot's design must allow controlled movement suitable for navigating the competition track and shall not be restricted to a single axis of motion.





- **Pre-Race Inspection**

All robots shall undergo mandatory inspection prior to competition. Non-compliance may result in disqualification. The decision of the organizers and referees shall be final.

- **Clarifications**

All design- or specification-related queries must be clarified with event managers prior to the event.

4. ARENA SPECIFICATIONS

- **Surface and Markings**

The arena shall consist of a white surface with a clearly defined black line serving as the robot's path.

- **Track Design**

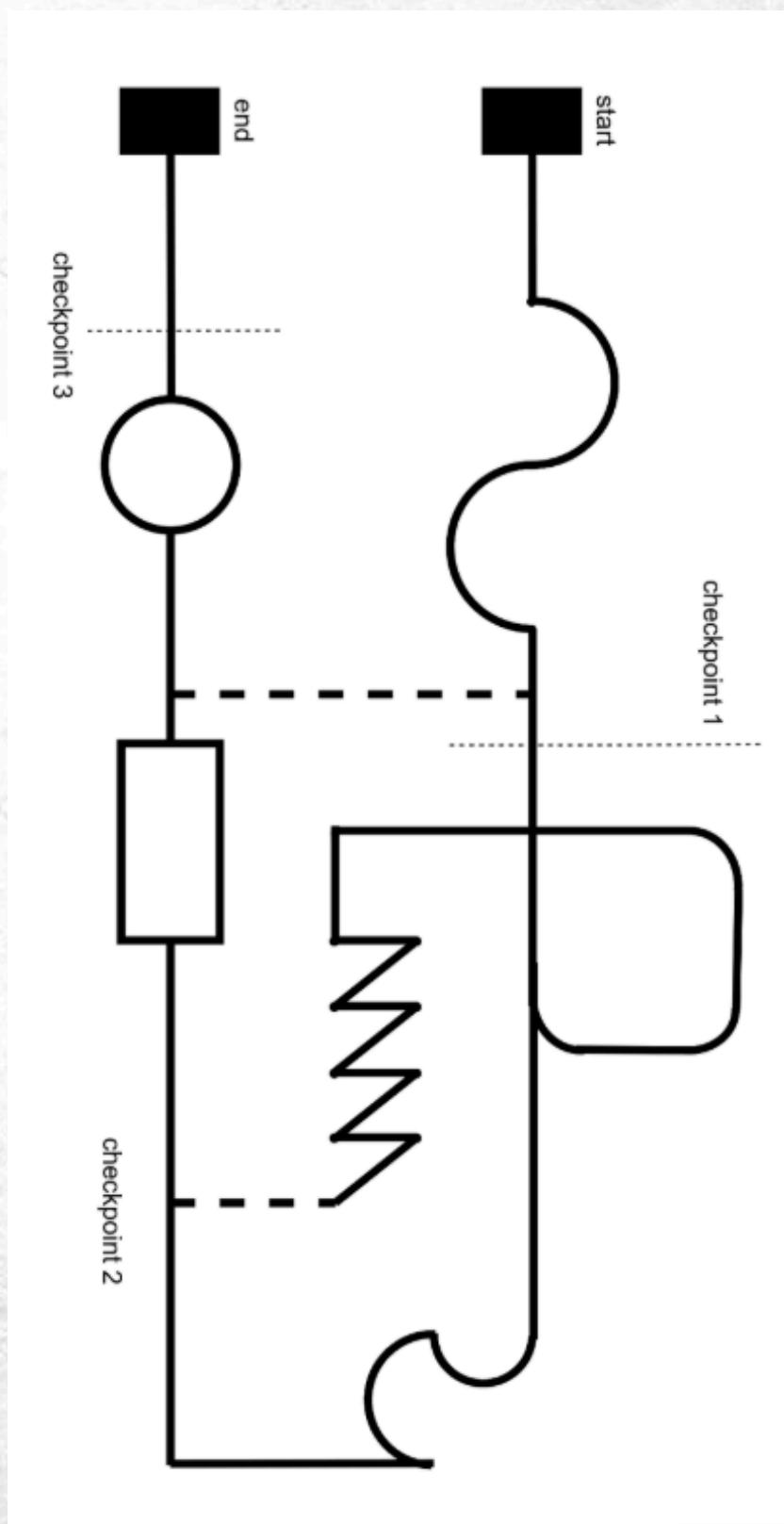
The track may include curved paths, intersecting or crossed lines, discontinuous segments, and looped sections. The line width shall be maintained between 3 cm and 4 cm.

- **Round 2 Complexity**

The Round 2 track shall be more complex and will be revealed only after completion of Round 1. Any additional instructions announced must be strictly followed.



Path:Round-1



5. GAME ZONE

- **Restricted Access**

Only referees and a maximum of two (2) designated robot handlers are permitted in the game zone.

- **Course Completion**

Robots must traverse the entire track from the START point to the END point within the prescribed time limits.

- **Time Limits**

1. Round 1: Maximum time – 5 minutes
2. Round 2: Maximum time – 5 minutes
3. Technical Time: 1 minute (for calibration only)

- **Time Enforcement**

Exceeding the allotted time will result in disqualification for that run.

- **Checkpoint Requirement**

In Round 1, robots must successfully cross all designated checkpoints to be considered valid.

6. PENALTY SYSTEM & HUMAN INTERVENTION

- **Human Intervention**

Any manual touch or external interference during a run shall be considered human intervention and will be considered as a penalty.





- **Penalty Application**

Each intervention shall incur a time penalty added to the total completion time.

- **Penalty Duration**

Penalty values shall be announced by the organizers and applied uniformly.

7. GAME STRUCTURE

- **Rounds and Attempts**

The competition consists of two (2) rounds. Each team is allowed two (2) runs per round. The best valid time shall be considered.

- **Event Format**

Robots must autonomously follow the black line from START to END. Ranking is based solely on time performance.

- **Rescue Mechanism**

If a robot becomes immobilized or enters an infinite loop, one relocation to a previously successful position may be permitted with referee approval. The timer shall continue to run.

- **Run Termination**

If the robot fails even after relocation, the run may be abandoned and declared invalid.

- **Round Advancement**

Top-performing teams from Round 1 shall qualify for Round 2. The number of qualifying teams shall be determined by the organizers.



8. SCORING, RANKING & DECISION MAKING

- **Scoring Basis**

Final score = Course completion time + penalty time.

- **Winner Determination**

The team with the fastest valid completion time shall be declared the winner.

- **Tie-Breakers**

1. Checkpoint completion times
2. Lower penalty time
3. Referee or organizer decision

- **Final Authority**

All decisions made by the organizers and referees are final and binding.

9. DISQUALIFICATIONS

A team may be disqualified for:

- Exceeding size or weight limits
- Damaging the arena
- Rule non-compliance
- Misbehavior or unsportsmanlike conduct
- Use of prohibited materials (LEGO kits)
- More than two team members in the game zone
- More than two robot adjustments per round
- Interfering with other robots



10. GENERAL INFORMATION

- **Certificates**

All participants shall receive certificates of participation. Winners and runners-up shall receive certificates of merit.

- **Review and Compliance**

All rules are strictly enforced and non-negotiable.

- **Documentation**

Teams are advised to keep a copy of this rulebook during the competition.

- **Participation Restriction**

A participant may not compete in more than one team for the same event.

- **Event Disclosures**

All official announcements shall be made prior to the start of each round.

11. REGISTRATION DETAILS & PRIZES

- **Registration**

Registration details shall be announced on the official Instagram page: @robotics_cbit.

- **Prize Pool**

Total Prize Pool: ₹12,000 (INR).



12. CONTACT INFORMATION

For event-related queries:

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