

Rulebook

Line Follower Robot

(Open for All)

About

The world is already moving quickly, but technological and informational innovation has made it even more so. Accepting diverse skill sets and abilities is crucial for ensuring adaptability and transformation that will increase efficiency over time. Thus, by showcasing some of your creative robotic talents, the **National Innovation Competition 2024 - Technocrats V.2** gives you the chance to reveal some of your hidden talents. In this event, you have to make your robot follow the specific line through your coding ability. The robot will start its journey from the start point and will finish at the endpoint. In between, there will be some checkpoints. The more checkpoints pass your robot successfully in a shorter time the more possibility of your robot winning the race.

Eligibility

- Participants from **any institution** can participate. This segment is open to all students in Bangladesh. Participants must have a current studentship status which could be verified by an **institutional ID card**.
- Each team shall be within **1-4 members**.
- Students from different educational institutions can form a team.

Registration Fee: 2,000/-

Registration Link: <https://forms.gle/rxym9ixzCGWHbbxDA>

(Please select your following segment during registration)

General Rules

- The competition is open to **all the students**. Participants must have a current studentship status which could be verified by an institutional ID card.
- A team could be formed by up to **4 members**. Solo members will also be counted as a team.
- If any team has one more member, additional fees will have to be paid. However, the total number of the team will not be **more than 4**.
- **Cross-institution** teams are allowed.
- Each team must have a **Team leader** and a team name.
- Qualified top-ranked teams from each round will be advanced to the next round. The highest number of the qualified team for each round will be decided by the organizing committee.
- There will be a **5 minutes** slot for calibrating sensors to the track before the competition. Any group could not practice on the track before the slot. Violating this rule will count as the reason for being disqualified.
- Every team must submit their robot during reporting time at the specific booth.
- The winner will be declared based on the **point** as well as the **time** to pass the track.
- The judges can question any mechanism of the robot and if found any unauthorized equipment, the team will be immediately disqualified for breaking rules.
- Judges' decisions will be counted as final decisions.
- Robot should put on the pre-assigned starting point and should stop at the stop point.

BOT SPECIFICATION

- Maximum dimension of the robot is **L- 25cm; W- 25 cm; H=20cm**.
- Maximum weight can be **2.5 kg**.
- The robot must be autonomous and any kind of wireless connection is forbidden.
- The voltage difference between any two points on the bot must not exceed **24 volts**.
- Every team should have its own power supply.
- Power source/Batteries should be situated inside the bot. Any wired connection to the outside will be forbidden and will be subjected to be disqualified.

ARENA SPECIFICATION

- Track dimension will be decided later.
- There will be a black line on the white surface or a white line on the black surface.
- The width of the line will be a maximum of **2.5 cm**.
- There will be no cave in the track but a line gap/dotted line, or bridge could be available in the track.

GAMEPLAY

- Each team will get **5 minutes** in the qualifying round and **4 minutes** in the final rounds to complete the track.
- After submitting the robot and during the competition any type of changing any software and hardware is strongly prohibited.
- Each time the robot loses the track should start from the previous checkpoint.
- Maximum **2 times** is allowed to restart the robot during a checkpoint. After **2 restarts**, the bot should skip the checkpoint and go for the next checkpoint.

GAME SCORING

Competition Abilities	Point	Final Round
Time, T sec	(300-T)	
Passing each checkpoint	+30	+60
For each restart	-15	-45
Passing special challenge successfully	+40	+30
Stop at endpoint	+20	+40
Bonus for completing all the checkpoints without touch	+20	+30
Breaking any of the rules during competition	-30	-60

Awards

- Champion will be given a price money of **20k** along with crest and certificates.
- Runner-Up will be given a price money of **15k** along with crest and certificates.
- 2nd Runner-Up will be given a price money of **10k** along with crest and certificates.

NOTE – The team Coordinator and Judge reserve the right to change the rules at any point in time. The change will however be highlighted on the website.

For Any Queries:

Contact/Organizers Details

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Sample Arena of Line Follower Robot

