Cerebro 2020

Bot Run

About

The objective is that the robot should follow a track marked with a line. The whole robot must start behind the starting mark and is considered to have crossed the finishing line when the robot stops on the marked end, and a red LED blinks indicating that the robot has finished its run.

Rules and Regulations

- This is a single-player event
- The robots will be thoroughly checked for any wireless communication, and no team member will be allowed to carry any electronic gadget in the room. Any such member found will result in disqualification of the entire team.
- The participant will be allowed to switch on the robot using a switch on the chassis, after which he will not be allowed to touch the bot unless it has stopped on the track.
- The track will be marked with 3 checkpoints, with the first checkpoint being the starting line. If a robot moves off-track, the robot will be allowed to restart from the last checkpoint it has crossed.
- Time is measured from the time the robot crosses the starting line until the time it crosses the finish line. A robot is deemed to have crossed the line the robot enters the finish box, and a red LED on the bot starts blinking
- A maximum of 3 minutes is allowed for a robot to complete the course.
- Time shall be measured by a judge with a stopwatch, based on the availability of equipment. In either case, the recorded time shall be final.
- Crossing one checkpoint (Not counting the starting line) will award the team 20 points.
- A robot is allowed 2 restarts during its run, and the robot will restart its run from the last checkpoint crossed. Each restart has a penalty of 10 points.
- Crossing the finish line will award the team 40 points, if the red LED starts blinking, otherwise only 20 points.

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- The score will be calculated using the following formula:

  Time taken to complete run in seconds(Integer value) = t

  Number of Penalties = n_1

  Penalty = p

  Number of Checkpoints crossed = n_2

  Checkpoint score = c

  Finish line score = f

  Calculated Score = $180 - t - n_1{*}p + n_2{*}c + f$

- The participants would be ranked on the basis of the score calculated above. The top two teams with the lowest time will be declared as winners.
- Once a robot has crossed the starting line it must remain fully autonomous, or it will be disqualified.
- A robot that wanders off of the arena surface will be disqualified. A robot shall be deemed to have left the arena when any wheel, leg, or track has moved completely off the arena surface.
- In case of any dispute, the decision of the organizers will be final and binding.