RoboFestival

Line follow category:

Robotics competition rules for the Line Follow category:

Objective:

The objective of the competition is to program the robot to follow a black line and complete the track in the shortest possible time.

Inspection:

The robot must only use Lego parts or Lego licensed parts from a third party and must not exceed the size of 25cm x 25cm.

Team:

Each team should have a minimum of 2 students and a maximum of 4 students. The maximum age of the students is 14 years old, and the minimum age is 8 years old.

General rules:

The robot should start from the start point and finish at the finish point. The use of Bluetooth to control the robot will result in disqualification. Each team will get three trials for each of the two tracks, and the best of three will be considered for each track. The team needs to pass the judging room design and coding round, and the coach is not allowed to help the team at any time. The team will have 30 minutes to prepare their robot before the round starts. The judge will test the same program that the student will use it for the track to ensure it follows the line before the start.

Track:

The track is a black line on a white background that is 2cm (+/- 2mm) thick. The track includes 90-degree angles, crosses, curves, and gaps, with a distance of 20cm (+/- 1cm) to the edge.
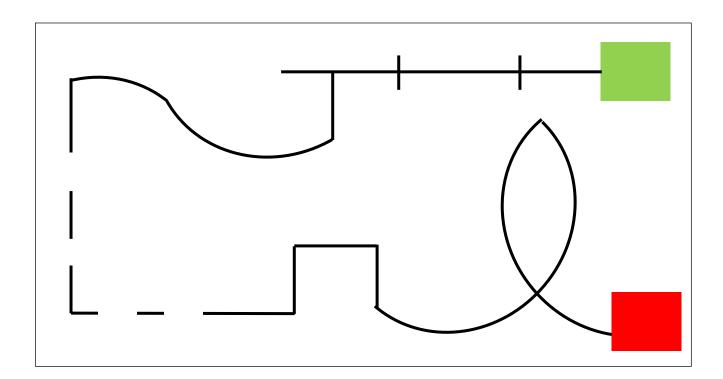
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Scoring:

The total score will be calculated by calculate the average for the best score for track 1, the best score for track 2, and the score obtained in the judging room. The score for each track is calculated by dividing the total distance covered by the time taken.

All teams must display good sportsmanship throughout the competition. Any team found guilty of unsportsmanlike behaviour will be disqualified.

Sample for the track:

Robotic sumo

Robotics competition rules for the sumo category:

The objective:

The goal of the competition is to push the opponent's robot out of the ring or immobilize it within the ring.

Team:

 Each team must consist of at least one and a maximum of three members. The maximum age of the students is 14 years old, and the minimum age is 8 years old.

Robot:

Each robot must be autonomous and fully constructed by the team members. The robot's maximum dimensions must not exceed 20cm x 20cm, and the maximum weight limit is 3kg.

The robot must only use Lego parts or Lego licensed parts from a third party.

Control:

The robot should not have any external control devices or wireless communication with the team members during the match.

Match Rules:

 The match will consist of three rounds, and each round will last for three minutes. The team that wins two rounds out of three will be declared the winner. The robot that is pushed out of the ring first, or is immobilized within the ring, will lose the round.

At the beginning of each match the robot needs to start inside the square in their side.

If the robots attached then no movement for 30 seconds, then the teams need to put the robot back to the start area (square).

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The table:

It will be a circle with dimensions 130 cm, the floor is white and black line width 2.5 cm (+/-1 cm)

Safety:

The robot should not have any sharp edges or dangerous components that could harm the opponent's robot or the audience. In case of any damage or harm caused by the robot, the team will be disqualified.

Scoring:

The winning team will be determined by a best-of-three format. To win, a team must win two rounds out of three. If there is no clear winner after three rounds, the team with the highest number of points will be declared the winner. Points are awarded for pushing the opposing team's robot out of the ring or immobilizing it within the ring.
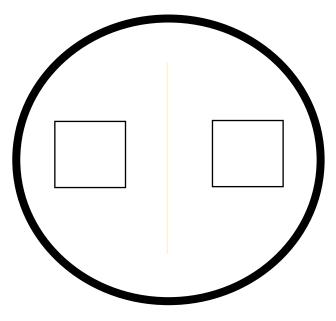
Judging:

The competition will be judged by a panel of judges appointed by the organizers. The judges' decision will be final and binding.

Protests:

Any protests must be made within 30 minutes of the announcement of the result. The organizers will review the protest and make the final decision.

Good Sportsmanship:

All teams must display good sportsmanship throughout the competition. Any team found guilty of unsportsmanlike behaviour will be disqualified.