Department of ECE

Line Follower Analog Robotic Competition 2020

(Open event for all departments)

Objective:

Teams have to build an autonomous robot which can follow a black path and keep track of directions while going through the arena. The bot has to analyze the path in the specified arena and has to go through the arena from the starting point to the ending point in minimum possible time.

Benifits:

1.This type of Analog Robots are used in industries as automated equipments.
2.With this competition students can learn about Microprocessors and Microcontrollers.
3.Students from NITs and IITs are enthusiastic to participate in this competiton, so we can expect large number of participants.

Arena :

The game field consists of an arena having dimensions 8feet X 8feet (lxb). It consists of the following:
1. The arena is composed of random paths made up of BLACK Strips.
2. The Angle between two adjacent white lines in the path is 90° or 135°.
3. The width of all black stripes will be 5cm.
4.There will be 3 checkpoints in the arena from start to destination.

Note: The dimensions of the arena will be accurate to within 5% whichever is less.

Gameplay:

The bot has to start from the ‘Start’ and finds its way to the ‘End’ through the best possible path within the specified time .

Game Rules:

1. Teams will be given 1 minute for calibration after revealing the arena. If any team is found to alter its code after depositing its bots,then it will be immediately disqualified from the competition. They are however allowed to make any other hardware changes.
2. Only one autonomous bot per team is allowed.
3. When the autonomous bot starts, no team member is allowed to touch the bot or enter the arena.
4. At the start of the task, the bot will be placed at the starting point. Only 1 team member is allowed to be near the game field while starting the bot.
5. Run will start only when organizers give the signal.
6. The starting procedure of the bot should be simple and should not involve giving bot, any manual force or
impulse in any direction.

Levels:

There will be two levels.
1.First level details will be updated soon.
2.Finale on (January 30 2020)
Note:Outsiders can directly participate in the finals.
Eg: Time consideration,usage of restarts,etc

Checkpoints:

1. The participants are allowed to take a maximum of 3 restarts in the entire match.
2. If the bot takes a restart in the second part of the competition, it has to start from the checkpoint of the arena. The timer will not be set back to zero and will not be paused in any case.
3. During a restart, a contestant must not feed information about the arena to the bot. However, contestants are allowed to adjust sensors (gain, position etc.) and make hardware changes.

General Rules:

1. Only 1 member of the team is allowed to handle the bot.
2. Participants are not allowed to keep anything inside the arena other than the bot.
3. Laptops/personal computers are not allowed near the arena. Other Wi-Fi, Bluetooth, etc. devices must be switched off. The organizers hold the right to check for these devices and their usage and disqualify the team.
4. The time measured by the organizers will be final and will be used for scoring the teams.
5. Time measured by any contestant by any other means is not acceptable for scoring.
6. In case of any disputes/discrepancies, the organizers' decision will be final and binding.
7. The organizers reserve the rights to change any or all of the above rules as they deem fit.

Team Specifications:

A team may consist of a maximum of 4 participants. Students from different departments can form a team .

Prize Money worth Rs.10,000/- will be awarded

WhatsApp group link:

https://chat.whatsapp.com/HtVCWQdasEGCr0rZY9TtJB

Registration Fee:

Rs.150 per team , Last date :20 January 2020.
Link: https://forms.gle/QZsLTUtqJSAJg7u5A

Prerequisites:

Laptop,Self-made robot and remaining components will be provided.

Organizers :

E3 - ECE
1.A.Bhanu (9182833204)
2.V.Bhargavi (8328581554)