SHADOW

Introduction

"A dangerous path

An important convoy

One faithful follower to protect the convoy from all harm"

Robodarshan in **Instruo 2014** presents you with a computer vision and autonomous robotics event where you have to follow a convoy robot using a colored object attached to it as landmark.

Problem Statement

Make a vision guided autonomous bot that will follow a convoy bot using a specific colored object attached to it as landmark.

Task

First Step:

Your bot will be placed in a high walled box having black walls, facing a colored arrow. The bot has to process the color and shape of the image to decide which way to rotate to face the convoy bot.

Second Step:

Next on rotating by almost 90˚, the bot will face the convoy bot. At this point of time, the convoy will start moving and your bot has to start following it immediately. The convoy bot will go on a path with twists and turns and your bot has to be a faithful follower of the convoy.

Third step:

At the end the convoy will move in a high walled box whose doors will be shut immediately. The black colored door will have a red 'X' symbol on it seeing which your bot should stop before a certain drawn line.

Arena

Rules and Specifications

- The maximum number of participants allowed per team: 4 people
- The participants will be provided with 220 Volts, 50Hz standard AC supply. Participants will have to themselves arrange for any other power supply required for their robot.
- Onboard processing units, if any, should fit within the dimensional constraints specified. Processing outside the arena is recommended, either wired or wireless.
- Teams qualifying the first round will go into the second round
- Teams cannot tinker with their bots inside the arena.
- USB extenders (5m long) will be provided.
- There will be a maximum of 2 restarts and 3 timeouts. The timeout can be of a maximum duration of 2 minutes and the bot must be restarted after a maximum of 5 minutes.
- The decision of Team Robodarshan will be final and binding.
- If we suspect hard coding, we reserve the full right to check the participant's robot by testing on random arenas.
- Any team displaying aggressive behavior or refusing to comply with Team Robodarshan's judgment will be immediately disqualified.
- Willful damage of the arena may lead to disqualification and a fine.

Scoring

Contacts

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