



UNIVERSITY CATEGORY

FOLLOW YOUR PATH 2.0

BY

YARL I T H U B





Disclaimer

The content of this prospectus is subject to change. Participants are advised to regularly check the official website, whatsapp group and our social media pages for updates and announcements.

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YARL IT HUB



Yarl IT Hub (YIT) is a not for profit social enterprise which strives towards inspiring, supporting and fostering Technology, Innovation and Entrepreneurship in the community.

It's an organization by the community for the community. The Yar IT Hub community consists of all those who share the dream of making Northern province in to the next Silicon Valley and abides by the core values of the organization.

YGC INNOVATION FESTIVAL 2024

01

YGC Innovation Festival is a captivating celebration that unites the spirit of innovation, imagination, and entrepreneurship under one event. It brings together entrepreneurs, seasoned professionals, and enthusiasts.

02

It includes groundbreaking pitch competitions and ingenious student expos to engage in hands-on workshops and insightful masterclasses, the festival offers an enriching experience that transcends boundaries and sparks new possibilities.

03

This year it is happening on the 1st, 2nd, 3rd and 4th of August 2024 at Jaffna Cultural Center



04

FOLLOW YOUR PATH - ROBOTIC CHALLENGE



Follow Your Path is a line following robotic competition where the robot goes through complex path. YGC Innovation festival is to be held on first four days of August, where the robotic challenge will be conducted second time this year. Last time it held only for school students and this time challenge is expanding into two categories.



PLOT BEGINNING

In the year 2045, the world is experiencing a technological revolution where AI and robotics have become integral parts of daily life. A popular new trend is the use of AI-powered delivery robots, which can navigate complex environments to deliver packages swiftly and efficiently. Your mission is to program a delivery robot for a high-stakes competition, where it must navigate through various challenges to deliver a critical package.

SETUP

The delivery robot, named "RoboCourier," is set to participate in the "Ultimate Delivery Challenge," a renowned event where the best AI-powered robots compete. The challenge involves navigating through a winding path, solving a maze, and making decisions based on observed objects to determine the correct delivery point.



THE CHALLENGE

Starting Line: RoboCourier begins its journey at the starting line. The path is marked with a clear line for it to follow.

The Maze: After a smooth start, RoboCourier encounters a complex maze. Using its advanced sensors and navigation algorithms, it maneuvers through the maze efficiently, always staying on the path.

Object Detection: Upon exiting the maze, RoboCourier arrives at a checkpoint on the left side of the path. Here, it must scan and count the number of packages (represented as boxes). The number of packages can be one, two, or three.

Decision Point: After counting the packages, RoboCourier continues along the path until it reaches a junction with three distinct colored boxes: red, green, and blue. Based on the number of packages it counted:

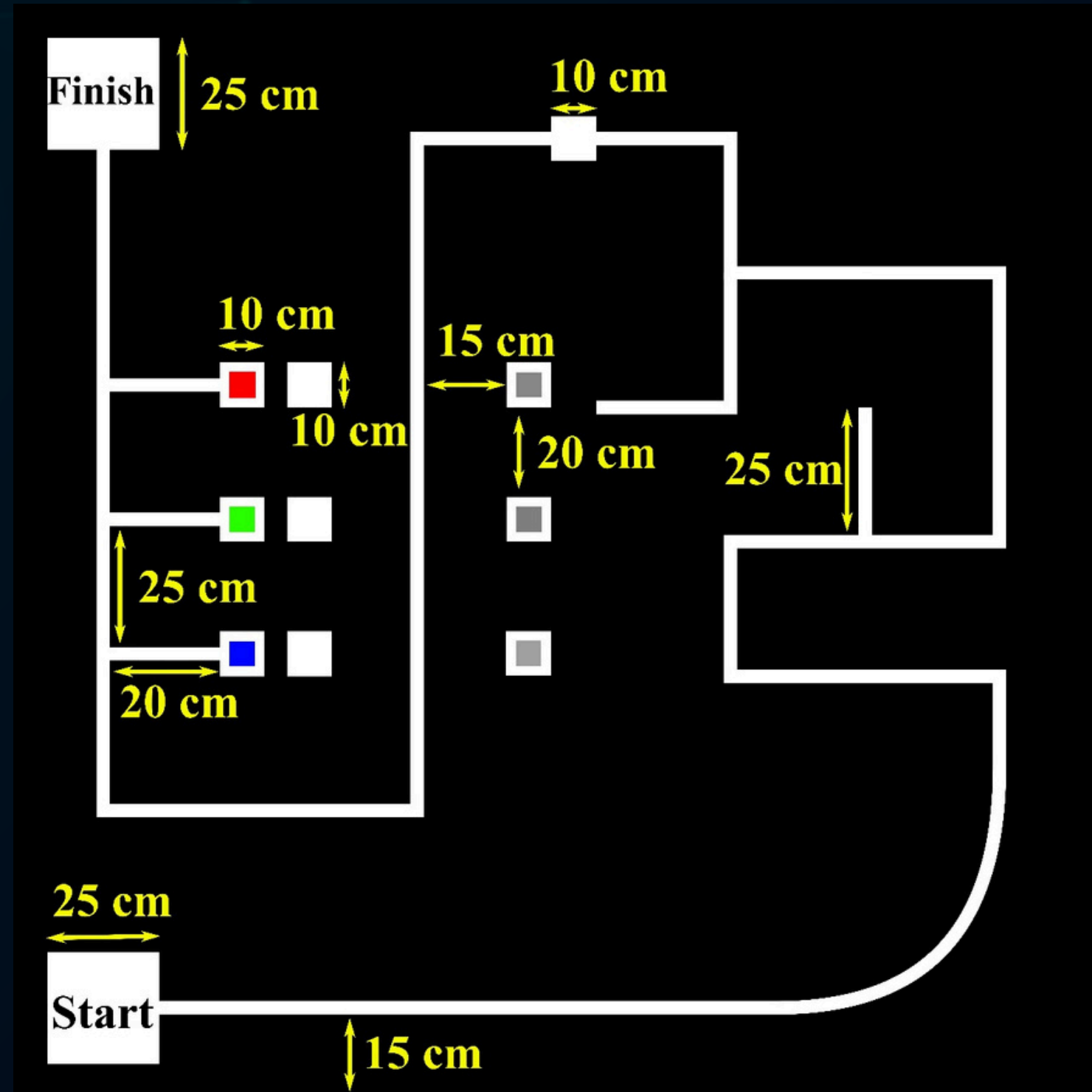
- If there is one package, RoboCourier must push the red box out of the box.
- If there are two packages, RoboCourier must push the green box out of the box.
- If there are three packages, RoboCourier must push the blue box out of the box.

Final Stretch: Having made the correct decision, RoboCourier resumes its journey along the final stretch of the line. It must navigate this last segment flawlessly to reach the finish line.

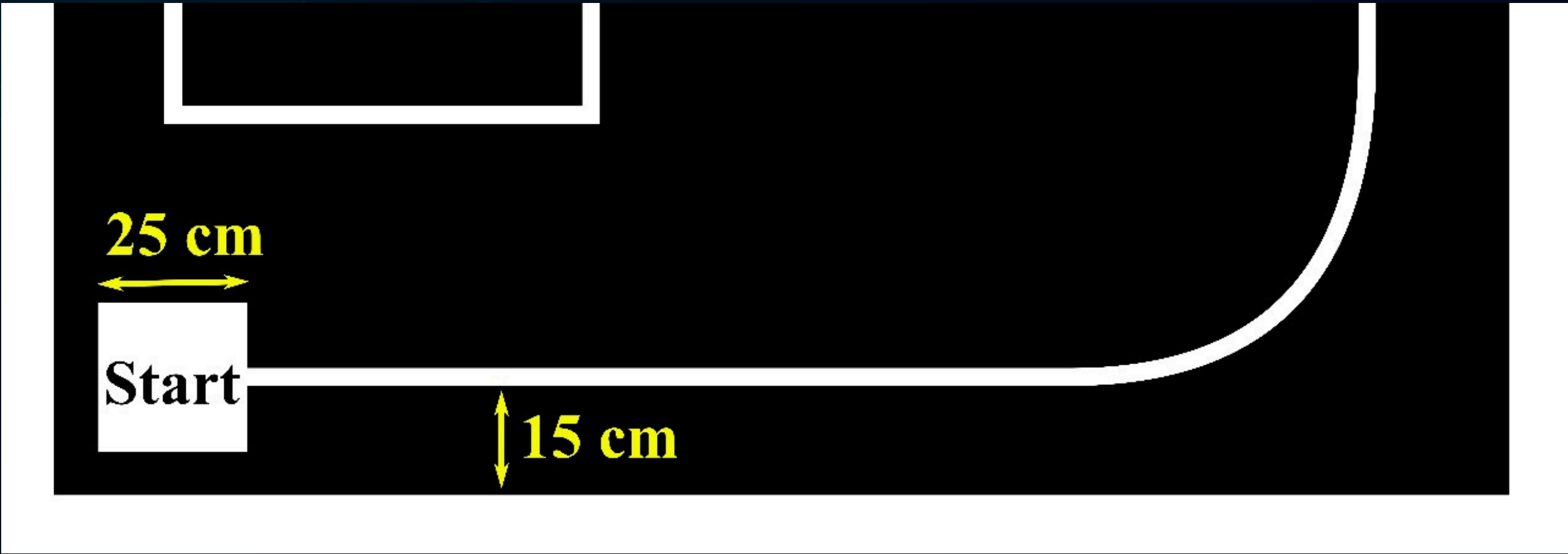




SAMPLE ARENA



SAMPLE ARENA



RULES AND REGULATIONS

- One minute will be allowed for calibration.
- The robot must fit within the 25x25 cm starting box (no weight limit).
- The team operator is only allowed to place the robot on the board and to push its starting button when told to do so.
- The judge will time the robot.
- Each robot can be given a maximum of three official trials from the Starting square and a total of 10 minutes run time will be given. The Robots finishing the path in the First Trial will only have the Time Bonus. The team may request for the other trials.
- The arena is 8x8 ft and black in colour.
- The lines are 3 cm wide white lines on black arena.
- The minimum line gap is 15cm.
- Robots should be submitted 10 minutes prior to the beginning of the competition



TEAM REQUIREMENTS

- Teams can consist of up to 5 participants from the same university.
- Each university can enter with multiple teams if they wish.

ROBOT REQUIREMENTS

- Each team must design and build their own line-following robot. Teams may use DIY Car Kits.
- Robots must be fully autonomous and not remote-controlled during the competition.
- The robot's power source must be self-contained (e.g., batteries).
- Teams must bring their own robot, sensors, and electronics.
- The robot must fit within a 25 x 25 cm dimension.



ROBOT SCORING

- Robots will be scored based on their performance in following the line and completing the course.
- Points will be awarded for Speed, Time Limit, Accuracy, and successful navigation.
- Penalties may be applied for leaving the line or other rule violations.
- Judges' decisions are final.

CODE OF CONDUCT

- Participants are expected to demonstrate good sportsmanship and fair play throughout the competition.
- Any unethical behaviour or cheating will result in disqualification.

PRESENTATION

- Judges may ask questions about the robot's construction and programming.



AWARDS

- Prizes will be awarded to the top-performing 3 teams based on their scores. Prize Giving will be held on the next day
- Participation Certificates will be provided to all the participants

SAFETY PRECAUTIONS

- Teams must ensure that their robots are safe to operate and do not pose any hazards to spectators or other participants.
- Participants should avoid touching any moving parts of the robot during operation.

INNOVATION

- Teams are encouraged to incorporate innovative features, sensors, or algorithms in their robot design to showcase creativity and problem-solving skills.



AWARENESS SESSION

- An awareness session will be held on 14th July 2024 at 8p.m. via Zoom. Participants are expected to attend the session for more clarifications
- Link for the session will be sent via Email.
- There will be an awareness video with Frequently Asked Questions released in Yarl It Hub's Youtube Channel.
- For more doubts and clarifications, You can contact via 077 040 8802 / 077 074 0146 during office hours from 2 p.m to 3 p.m.

REGISTRATION

- Participants must register their teams on or before 28th of July 2024
- Teams can register through this link: <https://www.yarlithub.org/festival/robotic>



TIMELINE





1ST RUNNER UP
30,000 LKR



WINNER
50,000 LKR



2ND RUNNER UP
20,000 LKR





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