Frequently Asked Questions related to Bright Future Cup 2024 (Version: 4th June 2024)

1) Are there any restrictions on the specifications of the robot?

Yes, there are restrictions on the choice of the motor, omniwheels, power supply and microcontroller. As for the physical size of the robot, the robot must fit in a cylinder of 20 cm in diameter with the kicking mechanism being inactivated. Other than that, there are no restrictions on the height and weight of the robots.

Please refer to the briefing slide of Bright Future Cup 2024, for further details on the restrictions.

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2) Can we use other microcontroller boards other than Arduino?

No, you may not use microcontroller boards other than Arduino. Furthermore, you may only use either Arduino UNO, Nano, Mega or Giga for your soccer robots. There are no restrictions on the choice of languages and compilers used to code the microcontrollers.

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3) Where can we purchase the football field and ball for our own practice?

Although you cannot purchase the football field directly from the organizer of Bright Future Cup ("Academy for Bright Future Young Engineers"), you may follow the guide below for purchasing the football field from various vendors. As for the ball, the organizer will issue a ball to each participating team by post.

If your team wants more balls, you may approach the vendor below for the printing of the ball.

https://www.pcbway.com/rapid-prototyping/manufacture/?type=2&reffercode=TOP

Please ensure that you use SLA technology and select the material "**Standard white material (UTR 8360)**" when making the order to print. The link of the 3D model can be downloaded below:

https://drive.google.com/file/d/143MXQ1Dpnd0HKIXCIvnvMhKyBg3YnrKE/view?usp=drive_link

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4) What are the exact rules if the ball is out-of-bound?

If a game gets stuck at the boundary of the soccer pitch, then the game will be reset by shifting the ball to where the center line of the soccer pitch is (perpendicular to the location where the game got stuck).

If the game got stuck anywhere near the penalty area, then the ball will be placed at the edge of the penalty area.

After reset, the robots can be placed anywhere within your half of the soccer pitch.

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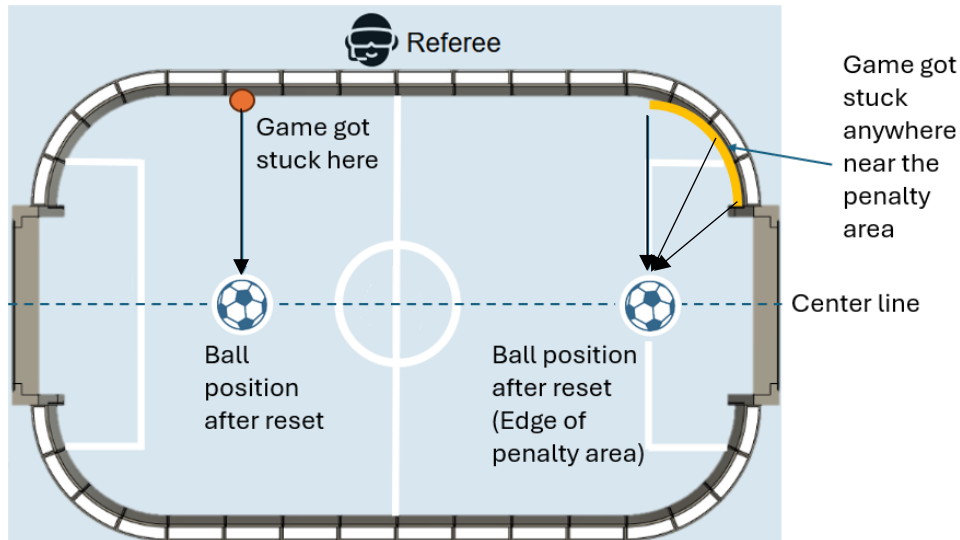
5) Can we write our own app instead of using MIT App Inventor as shown in the training workshops?

Yes. As long as you are not using commercially available apps to control your robots, please feel free to write your own apps using other software packages, other than the MIT App Inventor.

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6) Can we use compressed air to make the robot walk faster?

Technically yes, however the use of compressed air for such use is not recommended. This is due to the following reason:

If compressed air is being used for such purpose, the ball will be likely to be affected by the change of air flow due to such device. If you can design a device such that the ball will not be affected, then this is allowed if you can prove to us that this is indeed the case.

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7) Is it possible for us to use soldering to connect the electronic parts for our soccer robot?

Yes, you can.

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8) If my robots suddenly stop working during a match, can I replace or repair the robots immediately?

No. You must wait when the match is officially suspended before performing such actions. You may refer to the briefing slide of Bright Future Cup 2024, for further details on when the match will be officially suspended.