# **Technical Challenge S.2**

"I need some navigation support..."

## Goal

Within two minutes, shoot as many goals as possible to an open blue goal (i.e. with no opponent).

#### Description

- Get an updated version of SoccerSim specifically prepared for this challenge which you can locate at <a href="https://github.com/RoboCupJuniorTC/rcj-soccer-sim/tree/TC2">https://github.com/RoboCupJuniorTC/rcj-soccer-sim/tree/TC2</a> (please note it is in branch TC2)
- You are controlling (that is, programming) the yellow team robots (code should be located in the "robots" controller)
- One robot starts at a random location on the yellow side of the field. Another one starts at a random location on the blue side of the field. The ball is placed randomly on the blue side of the field.
- Both robots must stay within their respective half of the field.
- The IR sensor mounted on the robot on the yellow side of the field is capable of detecting the ball to a greater distance. Conversely, the IR sensor mounted on the robot on the blue side of the field can sense the ball only to very short distances see Figure 1 for clarification.
- Robots are not allowed to enter the opposite half of the field violating this rule results in -2 points and robots and the ball are reset.
- Scoring a goal to the yellow goal results in -1 point.
- Once the goal is scored, robots and the ball are reset.
- The timer stops after 120 seconds (two minutes)

# Grading

- For each goal scored to the blue goal you get +1 point.
- For each goal scored to the yellow goal you get -1 point.
- Each time a robot enters the other half of the field you get -2 points.

## **General Guidelines**

- You are **not allowed** to change the world file, referee's or ball's code.
- Please use the webots video export function ("Make Movie") and export to MP4/AVI.
- The video must be one take without cuts.
- The video must be uploaded to youtube.com or vimeo.com.
- Please send in your video submission until July 15th 2022 here: <u>https://forms.gle/Na2VxsLKzy96SbEG6</u>

Figure 1: Distance to which robots are capable of detecting the ball

