

Software Survey 2026

Team name

CAU Mountain&Sea

Which division(s) are you applying for? If your used software differs between divisions, please fill out the survey once per division.

Small Size (height < 110 cm, weight < 15 kg);Middle Size (height < 125 cm, weight < 25 kg);Large Size (height < 190 cm, weight < 80 kg)

Is your software fully or partially OpenSource? If so, where can it be found?

Partially OpenSource, <https://github.com/BoosterRobotics>

Are you using any software developed by other teams? If so, list every component that you are reusing and the team that originally developed it.

No, our software is purely based on the open source code from booster

Are you using any datasets in your research? If you are using your own datasets, are they public?

No, they are not public

Please list the scientific publications your team has made since the last application to RoboCup (or if not applicable in the last 2 years).

Not applicable

Are there any other contributions you would like to share with the RoboCup community?

Not right now.

Which approach are you using to generate the robot walking motion?

Deep reinforcement learning

Which approach are you using to generate other motions of the robot (e.g. kicking, standing up)?

Deep reinforcement learning

Do you have a kinematic or dynamic model of your robot? If so, how did you create it (e.g. measure physical robot, export from CAD model)?

Export from CAU model

What approaches are you using in your robot's visual perception?

Yolo+Camera Model+Particle filter

Are you planning with objects in Cartesian or image space? If you are using Cartesian space, how do you transform between the image space and cartesian space?

In cartesian space; By the standard image-to-cartesian transformation.

Do you have some form of active vision (i.e. moving the robots camera based on information known about the world)?

Yes, the camera will track the ball to keep the ball in the center of the image.

What approach are you using to localize your robot?

Yolo+Camera Model+Particle filter

Is your team performing team communication? Which communication protocol are you using?

Yes. By the wifi communication

What approach are you using for navigation? Are you avoiding obstacles?

Following the ball to do the navigation.

How is the behavior of your robots structured? (e.g. Behaviour Trees)

Yes, Behavior Trees

Are you simulating your robot? If so, which simulator are you using and for what purpose do you use simulations?

Yes, to generate the robot actions in simulation by DRL approach.

What operating system is running on your robot and which middleware are you using (for example Ubuntu 22.04 and ROS2 Galactic)?

Ubuntu 22.04 and ROS2 Galactic

Is there anything else you would like to share that did not fit any previous question?

No.