RoboCup 2023 Submission Survey

Survey response 1

Software

Team Name
Robit

Is your software fully or partially OpenSource. If so, where can it be found:
Our software is not OpenSource.

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

Are you using Inverse Kinematics? If so what solution (analytic, (pseudo)inverse jabcobian, etc...) are you using?
6-axis Inverse Kinematics solution of HUBO

Are you simulating your robot? If so what are you using simulation for?
No

What approach are you using to generate the robot walking motion?
Walk pattern generator

What approach are you using to generate motions for standing up?
p2p motion

What approach are you using to generate kicking motions?
p2p motion

Do you use any other motions than the previously mentioned? If so, what approaches are you using to generate them?

Which datasets are you using in your research? If you are using your own datasets, are they public?
Using our private datasets

What approaches are you using in your robot's visual perception?
Deep learning using Yolo v4-tiny

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?
Camera calibration

How is your robot localizing?
Monte-Carlo-Localization

Is your robot planning a path for navigation? Is it avoiding obstacles? How is the plan executed by the robot (e.g. dynamic window approach)?
No

How is the behavior of your robot's structured (e.g. Behavior Trees)? What additional approaches are you using?
Using our soccer algorithm

Do you have some form of active vision (i.e. moving the robots camera based on information known about the world)?
No

Do you apply some form of filtering on the detected objects (e. g. Kalman filter for ball position)?
Moving average filter for ball and lines position on field

Is your team performing team communication? Are you using the standard RoboCup Humanoid League protocol? If not, why (e.g. it is missing something you need)?
Our UDP communication program. It is more convenient to use self-produced programs.

Please list contributions your team has made to RoboCup
Participation in a RoboCup 2019 and 2022.

Please list the scientific publications your team has made since the last application to RoboCup (or if not applicable in the last 2 years).
No

Please list the approaches, hardware designs, or code your team is using which were developed by other teams.
No

What operating system is running on your robot and which middleware are you using (for example Ubuntu 22.04 and ROS2 Galactic)?
Ubuntu 18.04 and Ros1 Melodic

Is there anything else you would like to share that did not fit to the previous questions?

If you have a description document of your software you would like to share, you may do so here.
[{ "title":"RoboCup 2023 Software Description","comment":"team Robit","size":"729.076171875","name":"ROBOCUP-2023-Software-Description.pdf","filename":"fu_p9xqyn4zxbyasw4","ext":"pdf" },{ "title":"RoboCup 2023 Software Description abridgement","comment":"team Robit","size":"110.3828125","name":"ROBOCUP-2023-Software-Description-abridgement.pdf","filename":"fu_vp98jw4g9p22hkd","ext":"pdf" }]

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