

Guide for Reactive Agent

Name: Jeonghwan Lee Student Number: 300087373 Email: jlee475@uottawa.ca

Preparation

1. Visit cuLearn or <https://bit.ly/2CSkjsD>.
2. Download zip file and then extract the zip file.
3. Run "rcssserver" in rcssserver-14.0.3-win folder, "monitor" in rcssmonitor-14.1.0-win folder and then "TeamStart" in Krislet folder.

Reactive Agent Function : $E \rightarrow Ac$

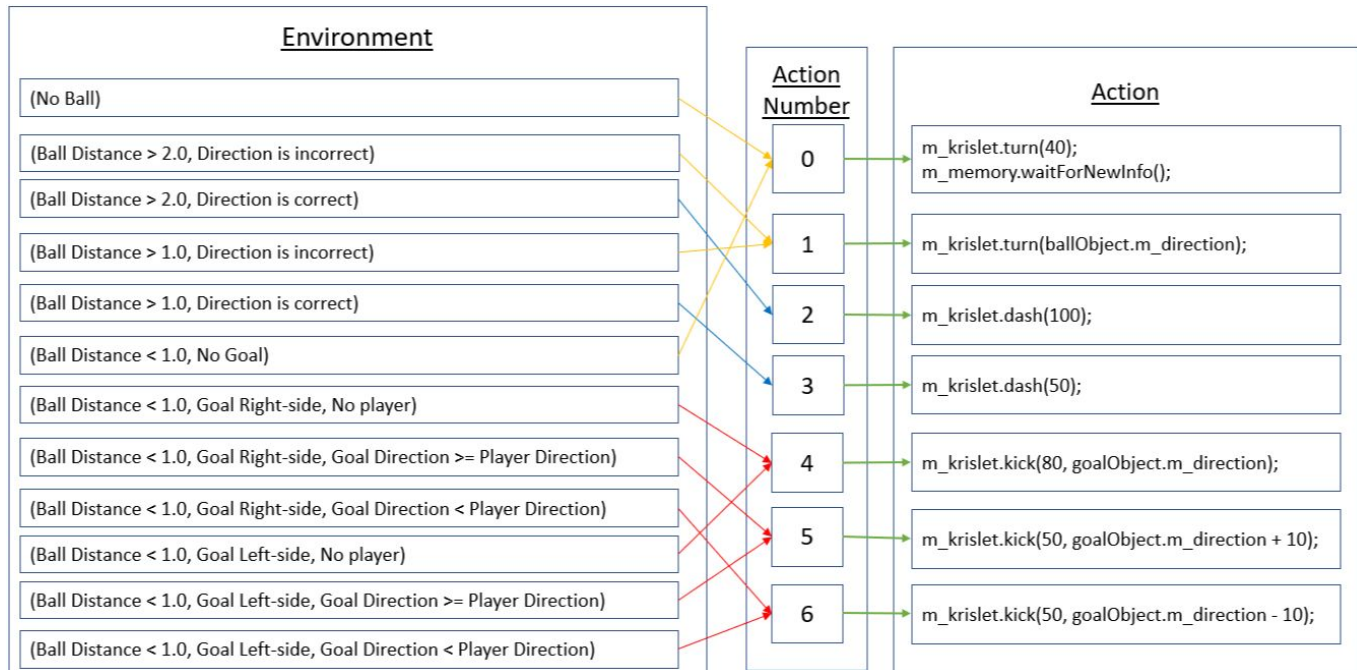


Figure1: Agent Function

Description: This reactive agent makes a decision based on the present environment, no referring to the past such as the previous action, state and environment. It also maintains an interaction with its environment and responds to changes occurred in order to achieve its goal, "scoring".

Environment: An agent gets the environment information in the form of "ObjectInfo" class each cycle from Memory. The environment information consists of what the agent saw and information from its server.

Action Number: It is stored in "AgentFunction.txt" and mapped to each environment line pre-written. It is concatenated to the last of the line as a "character". (e.g. Ball X BallDistanceLessThanOne X GoalNull_0)

Action: The agent takes an action based on the action number and implemented through a "switch..case".

Modify the behavior of the agent (No recompiling required)

1. Open "AgentFunction.txt" in Krislet folder. (both before/after executing the program possible).
2. Check how each environment is currently mapped to the action through the action number in figure 1.
3. For the proper behaviour as a soccer player, it is recommended to modify the action numbers within each group: The first group is (2, 3) and the second is (4, 5, 6).
4. After modifying the action number in the text file, save the change by pushing "Ctrl+s" and the agent action will be accordingly changed.