- 1. Task Description: There are two paddles in the game screen, which are located ...
- 2. Policy Description: We set up a XY-coordinate system for the game screen...

$$t_1 = (-0.31x_{\rm agent,1} - 0.19x_{\rm agent,2} - 0.19x_{\rm agent,3} - 0.34x_{\rm agent,4} - 0.018x_{\rm ball,1} - 0.014x_{\rm ball,2} \\ - 0.013x_{\rm ball,3} - 0.014x_{\rm ball,4} - 1.0x_{\rm opponent,1} + 0.36x_{\rm opponent,4} - 0.02y_{\rm agent,1} - 0.021y_{\rm agent,2} \\ - 0.022y_{\rm agent,3} - 0.018y_{\rm agent,4} - 0.018y_{\rm ball,1} - 0.018y_{\rm ball,2} - 0.015y_{\rm ball,3} - 0.018y_{\rm ball,4} \\ - 0.13y_{\rm opponent,1} - 0.017y_{\rm opponent,2} - 0.018y_{\rm opponent,3} - 0.017y_{\rm opponent,4} - 0.95)^2 \\ t_2 = 1 \\ t_3 = (-0.26x_{\rm agent,1} - 0.14x_{\rm agent,2} - 0.34x_{\rm agent,3} - 0.12x_{\rm agent,4} - 1.0x_{\rm opponent,4} - 0.027y_{\rm agent,1} \\ - 0.14y_{\rm agent,2} - 0.23y_{\rm agent,3} - 0.39y_{\rm agent,4} - 0.013y_{\rm ball,1} - 0.013y_{\rm ball,2} - 0.012y_{\rm ball,3} \\ - 0.012y_{\rm opponent,1} - 0.2y_{\rm opponent,2} - 0.28y_{\rm opponent,3} - 0.31y_{\rm opponent,4} - 0.83)^3 \\ t_4 = (0.11x_{\rm agent,1} + 0.24x_{\rm agent,2} + 0.17x_{\rm agent,3} + 0.14x_{\rm agent,4} + 0.013x_{\rm opponent,4} + 0.37y_{\rm agent,1} \\ + 0.15y_{\rm agent,2} + 0.085y_{\rm agent,4} + 0.51y_{\rm opponent,1} + 0.013y_{\rm opponent,2} + 1.0)^3 \\ \logits_{\rm noop} = -0.15t_1 - 0.53t_2 + 0.24t_3 + 0.31t_4 \\ \logits_{\rm up} = -1.1t_1 + 0.15t_2 - 0.21t_3 - 0.041t_4 \\ \logits_{\rm down} = 1.3t_1 + 0.95t_2 + 0.11t_3 - 0.32t_4$$

Key Influencers

The position of the opponent's paddle (particularly in the first frame), and the agent's position in the latest frame.

Key Influencers

The vertical movements of both the agent and the opponent in the latest frames, with emphasis on the agent's position.

Key Influencers

Primarily the vertical position and movement of the agent's paddle, and to a lesser extent, the opponent's paddle.

Pattern for Triggering Noop

A higher likelihood of "noop" is observed when the opponent's paddle moves upward or the agent's paddle is lower in the latest frame.

Pattern for Triggering Up

The action "up" is less likely when the agent's paddle is already higher or moving upwards, especially in response to the ball's trajectory or the opponent's movements.

Pattern for Triggering Down

More likely to be chosen when the agent's paddle is higher and needs to move downward, either to hit the ball or react to the opponent's actions.