



Effective Tracking of the Player- and Ball in Indoor Soccer Games in the Presence of Occlusion

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Abstract
Occlusion is one of the major challenges in visual tracking and recognition of objects in the environment. In particular, in soccer games, tracking the ball and matching it with other players is a major problem of tracking the ball. In this paper, we propose a tracking system for indoor soccer games and adaptive player recognition system. The proposed system utilizes learning automata and immune model. Then, the proposed system performs tracking and recognition of players and the ball. The proposed system can track both players and the ball. The proposed system can also track the ball in the presence of occlusion. The proposed system can also track the ball in the presence of occlusion.

A Learning Automata based Artificial Immune System for Data Classification

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Abstract

In this paper we propose an artificial immune system in which learning automata are used to adaptively determine the values of its parameters. Learning automata are used for altering the shape of receptor portion of antibodies to better complementarily match the confronted antigen. In order to show the effectiveness of the proposed artificial immune computer experiments have been conducted. The results of experimentation demonstrate that the proposed model is a good classifier in both performance and the number of memory cells used for explanation of each class.