

A Study on Motion Recognition of Objects in Soccer Game

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Abstract— Recognition of motion in football videos is necessary for an automatic understanding of the events that occur within football games. In order to recognize the motion, we first define the motions that can occur for each object in the football game, and make our system learn the object that performs the defined motion from the actual football game videos. Then, the system is configured to automatically recognize the motions generated in the actual football game videos within the defined motion. Experiments on motion recognition for 20 players, 1 referee, and 2 assistant referees were performed. The average recognition accuracy per motion for each object was 71.5%, 79.1%, and 93.7%. In this paper, we propose a method for simultaneously recognizing motions of various objects in football videos through learning.

Keyword— Motion recognition, football, learning

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