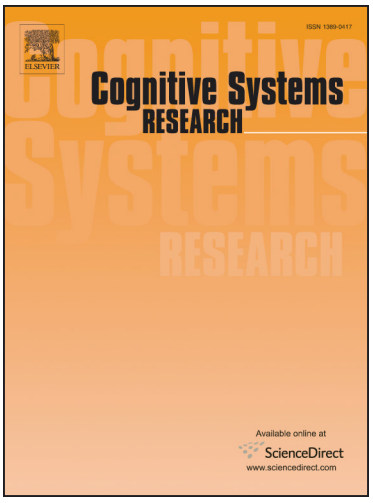

Online Position Recognition and Correction Method for Sports Athletes

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Online Position Recognition and Correction Method for Sports Athletes

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Abstract: In swimming, the correct recognition and correction of the wrong posture of the swimmer can improve the training quality of the athletes on weekdays. When the posture recognition is corrected, the affine deformation of the human body is easy to occur in the course of swimming. The traditional method is to extract these feature points and compare them with the correct posture to realize the recognition and correction of the posture. Due to the failure to detect and correct the wrong posture of athletes in real time, a method of position recognition and correction for swimmers with depth image bone tracking is proposed, and the threshold method is used to preprocess the image. The kalian filter is used to filter the collected image, Ago Si distribution function is used to obtain the action feature points from the filtered image, and the marginal point and the action feature point with low brightness are screened out by surf method. The Euclidean distance method is used to determine the distance between two adjacent feature points, and the feedback monitoring principle is used to identify and correct the wrong posture. The simulation results show that the improved pose recognition and correction method for skeletal tracking in depth image is improved. It can track and monitor the movement of athletes and complete the detection and recognition of swimming posture with high accuracy and strong stability.

Keywords: research; simulation; positioning recognition; correction method; swimming athletes

1. Introduction

Swimming is a traditional sport. It originated in the life, originated from human to human health and beauty, it is the organic combination of positioning recognition, dance, gymnastics, the three products of (Talebinezhad et al., 2012). Since 1980s the world's hot swimming was introduced into China in 30 years, Lai Jain exercises in my beauty in the rapid development and spread, and with the continuous development and innovation, the national primary and secondary schools and secondary schools greatly popularized, swimming has become one of the contemporary college students favorite sports swimming movement. Because of complex structure, various forms, is often multi joint and multi-site synchronous participate in activities, the swimming teaching physical body, positioning recognition rhythm, coordination, and memory requirements are very high (Elina Tergujeff, 2013). However, due to the rapid development of swimming, fitness routine, competition routines, the major primary school teaching routine update very quickly, the school swimming teacher training teachers are most limited opportunities to obtain relevant information of the swimming through simulation demonstration (Will Baker, 2010). And theory courses of college sports technology class to practice less, and teaching content more, there were many limitations of traditional teaching methods (Martha Ada Onjewu, 2016). The teacher in the class, to explain the technical essentials, a simple demonstration to organize teaching this teaching form