Golf Swing Correction Based on Deep Learning Body Posture Recognition

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With the rapid development of society and economy, people pay more and more attention to sports. Among them, golf has become more and more popular in China. However, golf swings are highly refined and usually require to be instructed by professional coaches. Actually, the time and economic cost of finding coaches have caused some degree of inconvenience to fast-paced urbanites. And sometimes wrong actions are difficult to be detected with naked eyes. This problem can be effectively solved by applying computerized human body recognition technology to the correction of golf swing. Based on the existing visual solutions for human pose recognition. This paper proposed a method of key frame detecting in video streams, and proposed a posture restoration based on pseudo angular velocity for the error detection problem of the existing Openpose. By quickly detecting key frames in the video stream, not only key skeleton information can be quickly extracted for golf action comparison, but also the amount of calculation can be reduced. During the golf swing, due to the cover by different parts of the body, some parts of the skeleton information is often detected incorrectly or cannot be detected. This paper proposed a method of the posture restoration based on pseudo angular velocity which can effectively repair the skeleton information that is incorrectly detected or not be detected.

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