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CricTrack: Expectations of Cricketers to Develop their Skills

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Abstract

Cricket is one of the world's most popular and rapidly expanding sports, with people of all ages and genders participating. However, many cricket players cannot afford proper facilities, making it tough to play the game. Several people who are passionate about cricket but can't afford thorough training owing to financial constraints and a shortage of instructors in small cities and rural places. Many individuals spend lots of money on training to improve their cricket skills. That should not be a reason for anyone who is passionate about cricket to pass it up any opportunities. Despite the fact that this has brought up various research possibilities for enhancing approaches for learning cricket independently, there has been very little effort done in this period. This research focuses on the batting ability of cricket players. To solve this issue, the author devised a novel method for assisting cricket players in improving, guiding, and tracking their performance while executing cricket strikes.

The proposed approach will play an important role in minimizing many players' inexperience and encouraging them to come forward and try to break the restrictions and limits. The purpose of this research is to develop a system that categorizes images of cricket strike images using human body key points recorded using Media Pipe. Using the recorded human body key points will help to classify the cricket shots using the Random Forest Classifier and the mobile application developed will help users analyse their user performance. The proposed model received an F1-score of 85 percent, far exceeding previous techniques. The "CricTrack" application was designed with significantly more features in mind than any research currently in use. Furthermore, a method based on similarities has been developed for comparing an individual's cricket shot to possible images of typical cricketers batting shots of the same type, determining the most comparable one, and producing a comprehensive output detailing their performances. The appropriate mobile app solution will help players improve strike accuracy while also allowing them to evaluate, improve, and track their striking results without having to train.

Keywords: Cricket, Batting Shot Classification, Machine Learning, Human Pose Estimation, Media Pipe, Random Forest Classifier