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Cricket Shot Recognition using Conditional Directed Spatial-Temporal Graph Networks

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Abstract : Capturing pose information in cricket shots poses several challenges, such as low-resolution videos, noisy data, and joint occlusions caused by the nature of the shots. In response to these challenges, we propose a CondDGConv-based framework specifically for cricket shot prediction. By analyzing the spatial-temporal relationships in batsman shot sequences from an annotated 2D cricket dataset, our model achieves a 97% accuracy in predicting shot types. This performance is made possible by conditioning the graph network on batsman 2D poses, allowing for precise prediction of shot outcomes based on pose dynamics. Our approach highlights the potential for enhancing shot prediction in cricket analytics, offering a robust solution for overcoming pose-related challenges in sports analysis.

Keywords : action recognition, cricket. sports video analytics, computer vision, graph convolutional networks
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