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Summary: Video action detection can better understand the video information by detecting the beginning and ending time and categories of human behaviors in video, and analyzing the behavior mode of human body in video. However, due to the large amount of video data and the difficulties of data annotation, video action detection is difficult. To solve the above problems, this paper proposes a video action detection algorithm based on weak supervised complementary learning. It uses limited video categories information and global information of video frames to train the model, and uses the time sequence weighted features in the video to supplement it, so as to predict the beginning and ending time and category of the behavior in the video. The experimental results show that, compared with the existing deep learning methods, the weak supervised complementary learning method proposed in this paper can achieve the same level of prediction results as the supervised method on the data set THUMOS'14.

MSC:
68T45 Machine vision and scene understanding
68T07 Artificial neural networks and deep learning

Keywords:
weak supervised learning; deep learning; behavior detection; visual attention