

IIT-Gn Team Develops System For Video Analysis Of Sports Events

AI to track sportspersons' performance

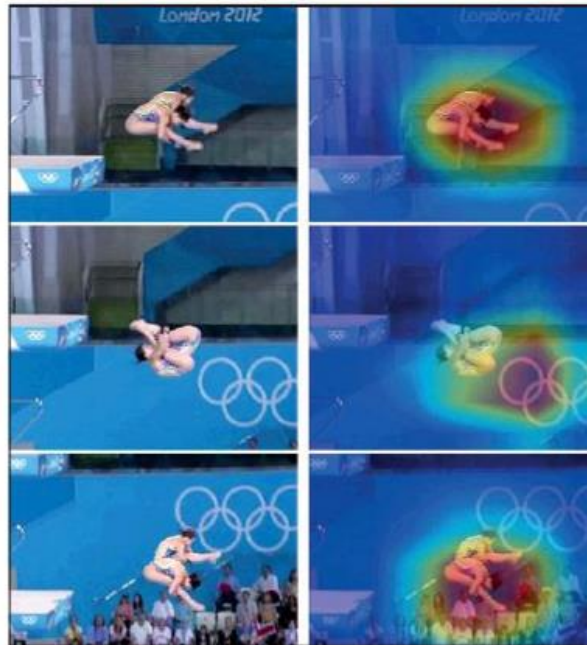
Parth.Shastri@timesgroup.com

Ahmedabad: Sports such as fencing, boxing or diving are very fast and seconds can make or break chances of winning.

While sports such as cricket and tennis are now extensively using software such as Hawk-Eye to track movement and trajectory of a ball, it's still a bit difficult to apply the same rule for the players due to complications involved.

While video footage review is used by teams to assess performances, a team from IIT-Gandhinagar (IIT-Gn) recently published a research where artificial intelligence (AI) was employed to track sportspersons and assess their performances.

The research titled 'Attentive Spatio-Temporal Representation Learning for Diving Classification' by Gagan Kanoojia, Sudhakar Kumawat and Prof



AS AI SEES IT: The system analyzes footage to track movement

Shanmuganathan Raman IEEE Conference on Computer Vision and Pattern

Seven emotions

Prof Raman and Kumawat along with Manisha Verma from Japan-based Osaka University had earlier developed an image processing method for facial expression recognition based on image sequences. The research focused on developing method to ascertain seven emotions - anger, contempt, disgust, fear, happiness, sadness, and surprise - not based on markers such as eyes and mouth but entire image. Experts working in the field said that with better camera and analysis tools, the field of machine learning and artificial intelligence can have a lot of applications ranging from identification of a person by video camera to analytics used by video streaming services to ascertain what is liked by specific users. **TNN**

Recognition Workshops.

"We chose diving as the sport due to two reasons - first, it is very fast and thus the entire action is contained in limited number of still frames in video footage. The second reason was availability of dataset for analysis such as Diving48 that have 18,000 clips to corroborate the findings," said Kumawat, a doctoral student.

The team developed an

attention guided long short-term memory (LSTM)-based neural network architecture that could analyze the frame, locate the diver in it and evaluate performance. Primary role of the system is to classify the sportspersons in pre-determined categories.

The researchers claimed that their model showed significant improvement over existing models.

Title 1: AI to track sportspersons' performance

Title 2: IIT-Gn Team Develops System For Video Analysis Of Sports Events

Source: Times of India (pg.no.2)

Link: <https://timesofindia.indiatimes.com/city/ahmedabad/ai-to-track-sportspersons-performance/articleshow/70425211.cms>

Date: 29/07/2019