

(12) PATENT APPLICATION PUBLICATION  
 (19) INDIA  
 (22) Date of filing of Application :31/12/2019

(21) Application No.201941054742 A  
 (43) Publication Date : 28/08/2020

(54) Title of the invention : A NOVEL METHOD AND SYSTEM FOR HUMAN ACTION RECOGNITION USING DIFFERENCE DEPT MOTION MAP AND CONVOLUTION NEURAL NETWORKS

(51) International classification	:G06K0009000000, G06K0009460000, G06K0009620000, G06N0003040000, G06T0007730000	(71)Name of Applicant : 1)S. Sandhya Rani Address of Applicant :Flat no 303,sai shiva residency, Road no :1, Jawahar Nagar colony, chanda nagar, Telangana India
(31) Priority Document No	:NA	(72)Name of Inventor : 1)S. Sandhya Rani
(32) Priority Date	:NA	2)Dr. Mohammad Ilyas
(33) Name of priority country	:NA	3)Dr. T SYED AKHEEL
(86) International Application No	:NA	4)Dr. Farha Anjum
Filing Date	:NA	5)Mahesh Enumula
(87) International Publication No	: NA	6)Dr. G VENKATARAMANA SAGAR
(61) Patent of Addition to Application Number	:NA	7)Dr. Appa Rao Naidu
Filing Date	:NA	8)Dr.Mohammed Jawaharin Basha
(62) Divisional to Application Number	:NA	9)Dr.P.Chandrasekhar Reddy
Filing Date	:NA	10)Dr. V. Usha Shree
		11)Dr.V.VIJAYA KISHORE

(57) Abstract :

Human Action Recognition has become the most significant research area for several applications like robotics, healthcare, gaming, smart houses, etc. However, in computer vision, action recognition from videos is one of the most challenging issues, due to some extraneous aspects like Occlusions, backgrounds, noises and so on. One solution to overcome the above-mentioned problems is acquiring only motion and shape cues from depth action video sequences. With this objective, in this paper, a new action representation approach is proposed based on Depth Motion Map (DMM), called as Difference Depth Motion Map (D2MM). Next, a well-designed CNN is trained especially to extract the features from two actions with a similar structure. The CNN model introduced in this paper involves five convolutional layers, three pooling layers, and one fully connected layer. The experimental results of the proposed method are compared with conventional methods on the publicly available dataset, MSR Action 3D. The comparative analysis proves that the proposed approach outperforms the prior art techniques.

No. of Pages : 17 No. of Claims : 6