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## Patent Search

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**Abstract:**

Cerebral Palsy (CP) is the disease among children in many countries. It is caused by abnormal brain development leading to impairment in balance, muscle tone, movement posture. In fact, CP is a set of disorders which is common in India with more than 10 lakh cases per year. Children with CP cannot have normal actions and gestures. Identifying their actions and gestures can lead to different computer based applications for them including learning portals and gaming. The current invention is meant for artificial intelligence (AI) enabled detection of actions and gestures of children with CP towards developing gaming framework. This kind of invention can help such children to play computer based or mobile games as normal children do. Thus it can enhance their capabilities and perception. A deep learning based supervised learning method is used to detect actions and gestures of children with CP. This will lead to actionable knowledge that can be used in different applications. The actions and gestures of children recognized by the invention can help in gaming framework for developing various kinds of games. Thus, such children can have privilege of playing games as normal children do. The invention can lead to realization of a gaming framework for such children. This invention benefits many stakeholders such as healthcare professionals, healthcare units, N and child game inventors besides researchers and academia.

**Complete Specification****Claims: We claim**

1. A system for recognizing actions and gestures of children with CP towards realizing a gaming framework.
2. A pre-processing module to improve quality of input video while it is being subjected to actions and gestures recognition.
3. A module for detection of regions of interest which improves quality of training besides reducing space and time complexity.
4. A feature extraction method that helps in finding features that contributes to class label prediction.
5. A module for deep learning based supervised learning which is realized by a deep CNN model.
6. A module to interpret the actions and gestures of children with CP to have actionable knowledge that is used in gaming infrastructure.
7. A solution to the problem of recognizing actions and gestures of children with CP towards gaming framework that enhances quality of their lives.

Description: FIFTH OF INVENTION

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