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# BIOSENSORS AND BIOELECTRONICS

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## Biosensors based artificial intelligence driven healthcare robots

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Recent days have seen a step rise in the need of physiotherapy especially for age-old people. Physiotherapy exercise prescribed for a particular patient by a Physician will be demonstrated to the patient by the qualified physiotherapist of the hospital. In case of old age patients there is a definitive need to supervise and guide through the exercise routine daily by physiotherapists. As elderly people may forget the guidelines and instructions to be followed while exercising, the physiotherapist need to be physically present and focus his attention towards a single patient, during the time of physiotherapy this overhead exposed or physiotherapists, leads to one-to-one assistance thereby increasing the need of number of physiotherapist. In order to overcome we can employ an Artificial Intelligence driven Machine Learning Robot, which works on the concept of IoT and Biosensors for assisting Physiotherapists. The demonstration by the physiotherapist is captured by customized biosensors, 3 cameras placed at

three points of an equilateral triangle (Pascal 60 to each other). The need for this geometrics set of equilateral triangle – for three different cameras is to obtain the 3 dimensioned (x,y,z) co-ordinates of leg movement, to be fed as input to servomoto bioelectronic component. The bio-electric servomoto is driven by machine learning and artificial intelligence algorithms could be processed by raspberry P 3 micro controller. By employing the Biosensors based Artificial Intelligence Driven Healthcare Robots, the physiotherapists can demonstrate an exercise for particular patients once, and the same will be simulated by the robot on demand. Whenever the patient practicing the exercise is in doubt, he/she may switch on the robot and observe the movements which are guided by physiotherapist earlier, thereby reducing the need for one-to-one attention of physiotherapist on the patient, throughout the exercise.

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