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Patent Search

Invention Title	A HYBRID OPTIMAL SYSTEM FOR TAILORED REHABILITATION TO EMPOWER PATIENT HEALTH
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Abstract:

The existing traditional methods focus on a single inability in the course of rehabilitation and are suffering with motivation, and may not address diverse patient needs. To overcome these challenges, an approach is required which address more than single impairment as well as tailored to specific patient needs. This demands a hybrid appro that consists of combination of cognitive and machine learning models. This integration minimizes gaps and improves personalized rehabilitation of individual patient. The combination chooses selectively meta-cognitive methodology with dynamic adaptive training and modified CNN with ensemble strategy. This hybrid system aims to provic comprehensive framework that efficiently caters individual patient. The outcomes of this hybrid system are to get better accuracy and promising efficiency when compare against the traditional approaches. This system addresses factors such as the availability of patient data as open source, minimizes the complexity of the rehabilitation tas effective management of computational resources. Stacking is an ensemble method can be used in personalized rehabilitation would mitigate individual model biases or uncertainties. This would enhance the reliability of this framework as well as adapt to diverse patient needs and preferences.

Complete Specification

Description:Title: A hybrid optimal system for tailored rehabilitation to empower patient health
Field and background of the invention:
Based on medical technology and advances in patient care, personalized rehabilitation is focused and aimed to address the multiple inabilities of a patient. There are ma traditional approaches used for this rehabilitation, and addresses single impairment, lack of motivation, lack of patient specific tailoring, and limited effectiveness. To overcome these challenges and pitfalls, a hybrid approach that support combination of cognitive model, machine learning model with ensemble strategy is designed.
Traditional approaches typically address only a single impairment, leading to several issues:
(i)   Limited Effectiveness: Focusing on one aspect may not address the full scope of a patient's needs, hindering overall recovery.
(ii)   Motivation Issues: Repetitive exercises targeting a single impairment can become monotonous, leading to decreased patient motivation and adherence to therapy plans.
(iii)   Lack of Personalization: Traditional methods often lack the ability to tailor therapy to individual patient needs and limitations.
These limitations highlight the need for a more comprehensive and engaging approach to rehabilitation.
Brief description of the system:
The proposed system is a hybrid optimal system for tailored rehabilitation. This system combines different approaches to create a more personalized and effective treatment plan for patients.
The key aspects of the system when divided into smaller modules such as :

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