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(पेटेंट नियमावली का नियम 74) (Rule 74 of The Patents Rules)

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फाइल करने की तारीख / Date of Filing 20/05/2021

पेटेंटी / Patentee

1. Dr. Laxman Singh (Associate Professor) 2. Mr. Sover Singh Bisht (Assistant Professor) 3. Dr. Mahipal Singh Choudhry (Professor) 4. Dr. Altaf Alam (Research Fellow)

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित **An IOT based Healthcare System for Predicting Severity Prognosis in Heart Patients using Machine Learning.** नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख मई 2021 के बीसवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled **An IOT based Healthcare System for Predicting Severity Prognosis in Heart Patients using Machine Learning.** as disclosed in the above mentioned application for the term of 20 years from the 20th day of May 2021 in accordance with the provisions of the Patents Act, 1970.



(Signature)
पेटेंट नियंत्रक

अनुदान की तारीख : 14/05/2024
Date of Grant :

Controller of Patents

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, मई 2023 के बीसवें दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।
Note. - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 20th day of May 2023 and on the same day in every year thereafter.

*चूंकि पेटेंटी व आविष्कारकों की संख्या अधिक है, पेटेंटी व आविष्कारकों के नाम पृष्ठ संख्या 2 पर जारी हैं।
*Since the Number of Patentees / Inventors is more, the name of Patentees / Inventors are continued on Page No. 2



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Patent Search

Invention Title	IOT BASED SMART HEALTHCARE SOLUTION FOR PREDICTING SEVERITY PROGNOSIS IN HEART PATIENTS USING MACH
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Abstract:

Our Invention IOT based Smart Healthcare Solution for Predicting Severity Prognosis in Heart Patients using Machine Learning is a heart disease is the worldwide and Predicting heart disease is a very complex task since it requires experience along with advanced and intelligent knowledge. The invention (IoT) technology has adopted in healthcare systems to collect sensor values for heart disease diagnosis and prediction and also a more researchers have tried of heart disease yet the accuracy of the diagnosis results is low. The invented IoT framework is to evaluate heart disease +99% accurately using a machine learning MLP and the smartwatch and heart monitor device that is attached to the patient monitors the blood pressure and electrocardiogram (ECG). The performance is analyzed by comparing the MLP with existing deep learning neural networks and logistic regression and also the results demonstrate that the MLP based invented system undertakes training as well as testing and the data from the UCI machine learning repository, Framingham, and Public Health Databases and evaluating the disease. The UCI repository has Cleveland, Hungary, Switzerland, and the VA-Long Beach databases and also selected the Cleveland records which are most complete.

Complete Specification

Our Invention is to a IOT based Smart Healthcare Solution for Predicting Severity Prognosis in Heart Patients using Machine Learning.

BACKGROUND OF THE INVENTION

The internet of things (IoT) along with wearable monitoring systems is a rising Method/technology that is anticipated to contribute an extensive range of advanced healthcare applications. The healthcare organization was fast to adopt the IoT as integrating IoT aspects into medical devices enhances the quality as well as the efficiency of service. This brings countable advantages for older people patients with chronic conditions and individuals needing stable management.

The IoT-based healthcare applications are utilized to gather essential data such as real-time changes in unique health parameters and updates of medical parameter's severity within a standard time interval, so IoT devices incessantly produce huge amounts of health data.

The IoT is acknowledged as the most crucial future method /technology and is gaining much attention from healthcare industries. The IoT was revealed to have important

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