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(71)Name of Applicant :
 1)MJP ROHILKHAND UNIVERSITY
   Address of Applicant :MJP ROHILKHAND UNIVERSITY, BAREILLY, INDIA Bareilly ------------ -----------
Name of Applicant : NA
Address of Applicant : NA
(72)Name of Inventor :
 1)Prof. Vinay Rishiwal
Address of Applicant :Professor, Dept. of CSIT, MJPRU, Bareilly, India Bareilly ----------- -----------
 2)Prof. S.S. Bedi
Address of Applicant :Professor, Dept. of CSIT, MJPRU, Bareilly, India Bareilly ----------- -----------
 3)Dr. Preeti Yadav
Address of Applicant :Assistant Professor, Dept. of CSIT, MJPRU, Bareilly, India Bareilly ----------- -----------
 4)Dr. Anil Bisht
Address of Applicant :Assistant Professor, Dept. of CSIT, MJPRU, Bareilly, India Bareilly ----------- -----------
 5)Mr. Sushil Gangwar
Address of Applicant :Dept. of CSIT, MJPRU, Bareilly, India Bareilly ----------- -----------
 6)Mr. Vinay Maurya
Address of Applicant :Dept. of CSIT, MJPRU, Bareilly, India Bareilly ----------- -----------

(57) Abstract :
Integrated IoT-based sleep pattern analysis, quality monitoring, and improvement system. The proposed invention introduces a novel integrated IoT-based sleep pattern analysis, quality monitoring, and improvement system designed to provide a comprehensive solution for optimizing sleep health. Utilizing the capabilities of Internet of Things (IoT) devices, the system seamlessly combines three essential functions: advanced sleep pattern analysis, real-time sleep quality monitoring, and adaptive environmental adjustments for improvement. Through this integration, the proposed system aims to deliver a holistic approach to sleep optimization. The IoT-connected sensors collect detailed sleep data, enabling precise pattern analysis and facilitating dynamic adjustments to the sleep environment. This inventive integration seeks to redefine the landscape of sleep technology, offering a unified and intelligent solution for individuals in pursuit of a personalized and effective approach to sleep health.

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