(19) INDIA

(22) Date of filing of Application :17/10/2024 (43) Publication Date : 25/10/2024

# (54) Title of the invention: REMOTE PATIENT MONITORING SYSTEM USING IOT TECHNOLOGY FOR MENTAL HEALTH ASSESSMENT IN BIOMEDICAL APP

(71)Name of Applicant:

1)KISHORE VERMA S

Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, GURU NANAK INSTITUTIONS TECHNICAL CAMPUS, KHANAPUR VILLAGE, MANCHAL, IBRAHIMPATNAM, TELANGANA, INDIA, PIN CODE-501506 --

2)MARTIN SAHAYARAJ 3)ADELINE JOHNSANA J S 4)JAYA PRATHA 5)RAVINDRA CHANGALA Name of Applicant: NA Address of Applicant: NA (72)Name of Inventor: 1)KISHORE VERMA S

Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, GURU NANAK INSTITUTIONS TECHNICAL CAMPUS, KHANAPUR VILLAGE.

MANCHAL, IBRAHIMPATNAM, TELANGANA, INDIA, PIN CODE-501506 --

(51) International classification :A61B0005000000, G16H0040670000, G16H0050200000, A61B0005024000, G16H0050200000, A61B0005024000, G16H0050200000, G16H005020000, G16H005020000, G16H005020000, G16H005020000, G16H005020000, G16H00502000, G16H00502000, G16H0050200, G16H0050200, G16H0050200, G16H0050200, G16H0050200, G16H0050200, G16H0050200, G16H005020, G16H005020, G16H005020, G16H005000, G16H005000, G16H005000, G16H00500, G16H00000, G16H0000, G16H00000, G16H00000, G16H0000, G16H00000, G16H00000, G16H00000, G16H00000,

G16H0050300000

(86) International
Application No
Filing Date
(87) International
Publication No

:NA
:NA
:NA
:NA

(61) Patent of Addition to
Application Number
Filing Date
:NA

Filing Date
(62) Divisional to
Application Number
Filing Date

NA
SNA

#### 2)MARTIN SAHAYARAJ

Address of Applicant :Professor, Department of Electronics and Communication Engineering, Sri Indu College of Engineering and Technology, !Facing Main Road, brahimpatnam Mandal, Rangareddy District, Auuditorium - Sri Indu Main Block Road, Sheriguda, Telangana-501510 ------

#### 3)ADELINE JOHNSANA J S

Address of Applicant: Associate Professor, Department of Electronics and Communication Engineering, Sri Indu College of Engineering and Technology, !Facing Main Road, brahimpatnam Mandal, Rangareddy District, Auuditorium - Sri Indu Main Block Road, Sheriguda, Telangana-501510 --------

#### 4)JAYA PRATHA

Address of Applicant :Research Scholar, Department of Computer Science and Engineering, Annamalai University, Annamalai Nagar, Tamil Nadu-608002 ------

### 5)RAVINDRA CHANGALA

Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, GURU NANAK INSTITUTIONS TECHNICAL CAMPUS, KHANAPUR VILLAGE, MANCHAL, IBRAHIMPATNAM, TELANGANA, INDIA, PIN CODE-501506 --

## (57) Abstract:

Mental health issues are an increasing worldwide concern, compounded by impediments to appropriate diagnosis and treatment. We describe a remote patient monitoring system that uses Internet of Things (IoT) technologies to improve mental health evaluation and 5 assistance. The system uses wearable devices and mobile apps to continually collect and evaluate crucial physiological and behavioral data, such as heart rate variability, sleep patterns, and daily activity levels. The system's real-time monitoring features enable healthcare providers to follow patient well-being outside of typical clinical settings, allowing for prompt interventions when required. It also empowers patients by providing them with 10 self-management tools like as mood monitoring and educational materials. The secure cloud architecture guarantees that patient data is securely kept and transported, allowing healthcare practitioners to make well-informed choices based on full information. This novel method promises to increase accessibility, engagement, and customization in mental health treatment, resulting in improved patient outcomes while addressing the critical demand for effective 15 remote solutions in mental health management.

No. of Pages: 17 No. of Claims: 5