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(54) Title of the invention : CLOUD-BASED HEART DISEASE IDENTIFICATION AND TREATMENT&NBSP;FOR SUDDEN HEART-BEAT RATE VARIATION USING CNN MODELS

(51) International classification	:A61B0005000000, A61B0005110000, G16H0010600000, G16H0040630000, A61B0005024000	(71) Name of Applicant : 1)Dr. M. INDRASENA REDDY Address of Applicant :Dept. of CSE, Rajeev Gandhi Memorial College of Engineering & Technology, Nandyal, Kurnool Dist, Andhra Pradesh, India 518 501. Andhra Pradesh India
(31) Priority Document No	:NA	2)Dr. M PURUSHOTHAM REDDY
(32) Priority Date	:NA	3)Dr. S. ZAHOOOR UL HUQ
(33) Name of priority country	:NA	4)Dr. C. SREEDHAR
(86) International Application No	:NA	5)A P BHUBANESWAR
Filing Date	:NA	6)K. SRIKANTH
(87) International Publication No	: NA	(72) Name of Inventor :
(61) Patent of Addition to Application Number	:NA	1)Dr. M. INDRASENA REDDY
Filing Date	:NA	2)Dr. M PURUSHOTHAM REDDY
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

Abstract The cloud/IoT technologies are integrated for online healthcare medical services for monitoring high-risk Heart Disease (HD) patients and in emergency situation for sudden Heart-beat Rate (HR) variations by communicating the specialists. The signal processing and cloud-computing techniques correlated to design the healthcare cloud-network system architecture for better services of people in diagnosing serious heart problems. An efficient framework is adopted for HD analyzes that utilize the open repository datasets to pre-train the model classifier using the normal and abnormal dataset samples. The wearable sensor device integrated with pulse and temperature sensors are used to extract the input features dataset from the people suffering with sudden Heart-beat Rate (HR) variations by consistently alerting the cloud/IoT buzzer of specialists and contact information in patients database. The classification algorithm analyzes the patients current samples with stored database for identification of Sudden Cardiac Arrest (SCA) or Heart Attack or normal pain for immediate treatment.

No. of Pages : 21 No. of Claims : 8



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 Department of Industrial Policy & Promotion,
 Ministry of Commerce & Industry,
 Government of India

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Application Details

APPLICATION NUMBER	202141025214
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	07/06/2021
APPLICANT NAME	1 . Dr. M. INDRASENA REDDY 2 . Dr. M PURUSHOTHAM REDDY 3 . Dr. S. ZAHOOR UL HUQ 4 . Dr. C. SREEDHAR 5 . A P BHUBANESWAR 6 . K. SRIKANTH
TITLE OF INVENTION	CLOUD-BASED HEART DISEASE IDENTIFICATION AND TREATMENT&NBSP;FOR SUDDEN HEART-BEAT RATE VARIATION USING CNN MODELS
FIELD OF INVENTION	BIO-MEDICAL ENGINEERING
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	mir555mittapalli@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	25/06/2021

Application Status


APPLICATION STATUS	Awaiting Request for Examination
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[View Documents](#)

➡ Filed ➡ Published ➡ RQ Filed ➡ Under Examination ➡ Disposed

In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in

EDP-R-1
 New Application-C.S. D/48339
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"FORM 1 THE PATENTS ACT 1970 (39 of 1970) and THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT (See section 7, 54 and 135 and sub-rule (1) of rule 20)				(FOR OFFICE USE ONLY)	
				Application No.	202141025214
				Filing date:	07-06-2021
				Amount of Fee paid:	1750/-
				CBR No:	20438
				Signature:	
1. APPLICANT'S REFERENCE /IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)					
2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]					
Ordinary (✓)		Convention ()		PCT-NP ()	
Divisional ()	Patent of Addition (✓)	Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()
3A. APPLICANT(S)					
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			Country	India
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3B. CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]				
Natural Person (✓)		Other than Natural Person		

	Small Entity ()	Startup ()	Others ()
4. INVENTOR(S) [Please tick (✓) at the appropriate category]			
Are all the inventor(s)	Yes (✓)	No ()	
same as the applicant(s) named above?			
If "No", furnish the details of the inventor(s)			
Name in Full	Nationality	Country of Residence	Address of the Inventor
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5. TITLE OF THE INVENTION: CLOUD-BASED HEART DISEASE IDENTIFICATION AND TREATMENT FOR SUDDEN HEART-BEAT RATE VARIATION USING CNN MODELS.			
6. AUTHORISED REGISTERED PATENT AGENT(S)	IN/PA No.		
	Name		
	Mobile No.		

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		E-mail ID	srikanth.cse@gprec.ac.in		
8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION					
Country	Application Number	Filing date	Name of the applicant	Title of the invention	IPC (as classified in the convention country)
9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY (PCT)					
International application number			International filing date		
10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16, PARTICULARS OF ORIGINAL (FIRST) APPLICATION					
Original (first) application No.			Date of filing of original (first) application		

11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT

Main application/patent No.

Date of filing of main application

12. DECLARATIONS

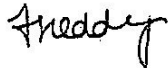
(i) Declaration by the inventor

(In case the applicant is an assignee: the inventor may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period).

I, the above-named inventor is the true & first inventor for this Invention and declare that the applicant herein is my assignee or legal representative.

(a) Date: 07.05.2021

(b) Signature:



(c) Name: Dr. M. INDRASENA REDDY

(a) Date: 07.05.2021

(b) Signature:



(c) Name: Dr. M PURUSHOTHAM REDDY

(ii) Declaration by the applicant(s) in the convention country

~~(In case the applicant in India is different than the applicant in the convention country: the applicant in the convention country may sign herein below or applicant in India may upload the assignment from the applicant in the convention country or enclose the said assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period)~~

~~I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.~~

~~(a) Date~~

~~(b) Signature(s)~~

~~(c) Name(s) of the signatory~~

(iii) Declaration by the applicant(s)

We the applicant(s) hereby declare(s) that: -

We are in possession of the above-mentioned invention.

The provisional/complete specification relating to the invention is filled with this Application.

The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us-NA

There is no lawful ground of objection(s) to the grant of the Patent to me/us. - NA
We are the true & first inventor(s).

We are the assignee or legal representative of true & first inventor(s).

The application or each of the applications, particulars of which are given in Paragraph-8, was the first application in convention country/countries in respect of my/our invention(s)-NA

We claim the priority from the above-mentioned application(s) filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which We derive the title.

My/our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Paragraph-9- NA

The application is divided out of my /our application particulars of which is given in Paragraph-10 and pray that this application may be treated as deemed to have been filed on DD/MM/YYYY under section 16 of the Act

The said invention is an improvement in or modification of the invention particulars of which are given in Paragraph-11 – NA

13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION

(a) Form 2

Item	Details	Fee	Remarks
Complete/ provisional specification) #	No. of pages - One		
No. of Claim(s)	No. of claims Eight and No. of pages – One		
Abstract	No. of pages - One		
No. of Drawing(s)	No. of drawings and No. of pages – Nine and Eight		

In case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of the drawings for the complete specification under rule 13(4), the number of such pages filed with the provisional specification are required to be mentioned here.

(b) Complete specification (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).

(c) Sequence listing in electronic form

(d) Drawings (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).

(e) Priority document(s) or a request to retrieve the priority document(s) from DAS (Digital Access Service) if the applicant had already requested the office of first filing to make the priority document(s) available to DAS.

(f) Translation of priority document/Specification/International Search Report/International Preliminary Report on Patentability.

(g) Statement and Undertaking on Form 3

(h) Declaration of Inventorship on Form 5

(i) Power of Authority

(j).....

Total fee Rs. 4,500.00 in bearing Demand Draft No. 212443 Dated 28.04.2021 drawn on Axis Bank, Nanganallur Branch.

I hereby declare that to the best of my knowledge, information and belief the fact and matters stated herein are correct and I request that a patent may be granted to me for the said invention.

Dated this Wednesday of 07th of May 2021

(a) Signature:

(b) Name: Dr. M. INDRASENA REDDY

(a) Signature:

(b) Name: Dr. M PURUSHOTHAM REDDY

(a) Signature:

(b) Name: Dr. S. ZAHOOR UL HUQ

(a) Signature: *Sreedhar*
(b) Name: Dr. C. SREEDHAR

(a) Signature: *A.P. Bhuvaneshwari*
(b) Name: A P BHUVANESWARI

(a) Signature: *K. Srikanth*
(b) Name: K. SRIKANTH

To,
The Controller of Patents
The Patent Office, at Guindy, Chennai – 600 032.

Note: -

- * Repeat boxes in case of more than one entry.
- * To be signed by the applicant(s) or by authorized registered patent agent otherwise where mentioned.
- * Tick (✓)/cross (x) whichever is applicable/not applicable in declaration in paragraph-12.
- * Name of the inventor and applicant should be given in full, family name in the beginning.
- * Strike out the portion which is/are not applicable.
- * For fee: See First Schedule";