



**Patent Attorney Worldwide Private Limited** [CIN U93090PN2019PTC187826]

WestEnd-one, 169/1, 11th Floor, Share-a-Space- Office near WESTEND MALL Aundh, Wireless Colony, Aundh, Pune, Maharashtra 411007 India.

Offices: Pune. Mumbai. Delhi. Bangalore. Chennai. Hyderabad

Website : <https://patentattorneyworldwide.com/in/>

Email : [contact@patentattorneyworldwide.com](mailto:contact@patentattorneyworldwide.com) Contact: [+91 2250165074](tel:+912250165074)

## **Invention Disclosure form - Confidential**

The video below would help you with understanding " the exact information needed to file a patent application that is creating invention disclosure for your invention." video link:

[https://youtu.be/2ft\\_oQ0uR8I](https://youtu.be/2ft_oQ0uR8I)

[Information needed to file a patent application: creating invention disclosure - Prasad Karhad](#)

### **1. What is the Title of the Invention (Not more than 10 to15 words)**

AI continuous personal heart vital sign monitoring wireless battery powered device & heart attack alerting, body sound recording using mobile app,machine learning & computer algorithm with inbuilt space pocket for medicine storage.

### **2. what is the Abstract of the Invention (Kindly explain the crux of the invention is about 150 to 200 words.)**

Artificial intelligence powered wireless wearable device in neck like pendant to monitor , record & analyze heart activity predict abnormal heart activity like heart attack, heart disease , lung disease and other abnormalities using artificial intelligence, machine learning & software algorithm.

Devices have various sensors like microphone, electric measuring sensor, heart rate monitoring sensor,sweat sensor, oxygen level measuring sensor , wireless communication sensor like wifi,bluetooth & lithium ion battery.

User can wear a neck like necklace pendant and it remains around the center part of the human chest to record vital body sign . This records transmitting to mobile app/computer and analyzed to detect abnormal sound and alert user , medical staff, family members with help of buzzer, sound, sms, call or inbuilt speaker audio system. Device has inbuilt space to store medicine tablets which the user can take by opening it.

### **3. what are some of the Key Words that can describe the invention:**

AI heart monitor, heart attack prediction/alert wearable pendant with tablet storage system, artificial intelligence health alert necklace with pill storage

### **4. Background of the Invention:**

No one is monitoring the most important machine of our body and that is the heart. We only go to hospital when we have chest pain in chest, many time heart attack strike without any symptoms.

We try to alert people by wearing smart AI pendants which will monitor the heart around clock. Our body gives some signal before a heart attack, we record such signals , analyze it and alert user for any upcoming event. People can take tablets stored inside our device incase of heart attack.

The current heart monitoring system is heavy and only can be used in hospital settings with help of highly trained doctors only. Moreover current ecg, heart sound device does not have wireless communication and prediction function. Our device is small, 60 mm and about 150 gram can be worn like a necklace pendant by anyone at home, office and has wireless communication functionality.

Current devices only measure but do not process, organize , record & predict disease using artificial intelligence, machine learning, and computer algorithms to alert/inform users for abnormalities.

**5. What problems does the invention solve and how is your invention able to overcome the limitations/ problems of the existing solutions or technologies (mentioned in step 4)?**

Heart disease is responsible for about 33% of deaths worldwide because we can not diagnose it early, we go to the doctor only when we feel pain

. India is facing a major shortage of heart specialist doctors and people can not afford high fees. Our device is very cost effective which everyone can wear all the time and monitor heart & other body parts vital signs. Our device, software , algorithm combined predicts heart disease , heart attack, lung disease and alerts people. So people can go to the doctor for checkups.

During heart attack emergency services like ambulances take time to arrive because of traffic, or rural areas. If a patient can have emergency medicine within 30 minutes, life can be saved. For that our device has a tablet storage system inside it so such medicine always remains with patients.

Moreover pill storage functions inside devices in which people can store emergency heart attack medicine like aspirin or nitroglycerin. Once our device predicts a heart attack, the user can open the device and take a tablet instantly until an ambulance arrives and life can be saved.

**6. Detailed Explanation of the Invention along with working examples. Kindly provide a detailed description of each and every aspect of the invention (product and/or process).**

Our device is a pendant shape & size which people can wear on their neck. It is a bluetooth & wifi wireless enabled lithium ion battery powered with artificial intelligence mobile application.

People can wear it on their neck and connect with our Ai mobile app or computer.

People can **wear 24 hours like a necklace** and the device monitors vital body signs from heart, lungs and other inner body organs. Our device use **microphone sensors, audio collection sensor, heart rate monitoring sensor, oxygen monitoring sensor & electric signal sensor.**

Then devices transmit data to our mobile application with help of wireless communication like bluetooth & wifi.

Our designed algorithm uses our software, artificial intelligence, machine learning, neural network, computer vision to analyze, process data to calculate the possibility of abnormal body signs activity like **heart murmur which is a sign of heart attack, abnormal electrical sign from body, oxygen level in body.** After combining **pre pre-trained data set, our algorithm tries to predict diseases like heart attack, heart valve problems, and lung disease.**

**After prediction our artificial intelligence algorithm alerts people,** their family members, with the help of communication like sms, call, email, buzzer with the help of an inbuilt speaker. If the doctor confirms our device, contact the emergency service, family members and share patient details, locations & vital body signs over the internet. Doctors remotely can see, read, listen to ecg results, heart sounds and body sound to confirm heart attack.

Moreover, if it is a heart attack and an online doctor confirms it, the user can open the tablet storage section of our device where **emergency sublingual medicine is stored.** User can take this emergency sublingual aspirin or nitroglycerin tablet so the user can have more time until emergency service arrives.

Patients can **keep a record of vital signs on our system** and share with family, record and access in future.

7. Please attach any relevant diagrams, drawings, reports, papers, charts, Block diagrams or flow charts, or any other relevant diagrams to explain the invention. Below is the link for Guideline on creating diagram or flow chart for invention: <https://patentattorneyworldwide.com/guidelines-for-creating-drawings-diagrams-or-flow-chart-for-patent-applications/>

8. What are the aspects of your disclosure that you want to claim/monopolize?

Proposed Claims: Artificial intelligence & internet of things powered body monitoring and heart attack alert device system 24 hours 7days week, 365 days around year, smart heart attack pendant, AI heart attack alert device

Smart necklace pendant , smart wearable necklace to monitor heart

9. Have you conducted a novelty/inventiveness search for your invention? If yes, what are the databases /references used by you? What are the search results?
10. Do you feel that a person of “average” skill (not-extraordinary skill) in your technology area would have developed your invention? using existing knowledge in the public domain? If not, what could be the reasons for the same?

This device is a combination of 3 technologies namely **artificial intelligence algorithm software, healthcare & internet of things electronics technologies**. So an average person of any **field can not develop a heart attack alert device**, it needs multidisciplinary domain knowledge of all 3 fields.

We are a team of researchers from all 3 fields and working on this.

11. Kindly provide broad workable ranges for all the parameters involved in your invention. for example temperature range (70 degrees to 100 degrees) etc. or any relevant range if applicable to your invention (leave it blank if it is not applicable to your invention )

Our device remains in skin contact with user, **temperature range -80 degree to 100 degree**

12. References (if any)

Guideline for selecting Inventor and Applicant for Indian Patent application:

<https://patentattorneyworldwide.com/in/choosing-inventor-and-applicant-details-in-an-indian-patent-application/> .

13. Inventors Details (Full Names, Nationality, and Addresses)

Koladiya Kirit Arjanbhai.

307 Saffron homes,near surbhi 2,nikol, ahmedabad city,ahmedabad, T B nagar,Gujarat, 382350

Indian

Inventor Details					
Sr. No.	Name	Address	Nationality	Email ID	Contact Number
1					
2					

3					
---	--	--	--	--	--

**14. Applicant Details (Full Names, Nationality, and Addresses)**

Koladiya Kirit Arjanbhai.

307 Saffron homes,near surbhi 2,nikol, ahmedabad city,ahmedabad, T B nagar,Gujarat, 382350

Indian

<b>Applicant Details</b>					
<b>Sr. No.</b>	<b>Name</b>	<b>Address</b>	<b>Nationality</b>	<b>Email ID</b>	<b>Contact Number</b>
1					
2					
3					

**15. any other relevant information.**

Video: [How to Choose Patent Applicant in India Individual vs Company for faster Grant](https://youtu.be/6OI3k7LNtRs)  
<https://youtu.be/6OI3k7LNtRs>

\*\*\*\*\*