



e-ISSN: 2319-8753 | p-ISSN: 2347-6710

IJRSET

International Journal of Innovative Research in
SCIENCE | ENGINEERING | TECHNOLOGY



INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

Volume 12, Issue 7, July 2023

ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 8.423

9940 572 462

6381 907 438

ijrset@gmail.com

www.ijrset.com

Health Monitoring Systems on Automatic Wheel Chair

Ambika C. Chitali ¹, Pranoti D. Lande ², Simran L. Mujawar ³,

U.G. Student, Department of Electronics & Telecom Engineering, Brahmaveddada Mane Institute of Technology, Belati, Maharashtra, India¹²³

Associate Professor, Department of Electronics & Telecom Engineering, Brahmaveddada Mane Institute of Technology, Belati, Maharashtra, India⁴

ABSTRACT: A healthy person discharge his duties efficiently without taking help of other person but unfortunately on the other hand, physically handicapped person either from birth or due to some misshaped in his life or at some stage of life is dependent on other to perform any kind of work. The system we developed will measure a patient’s body temperature, heartbeat, and oxygen saturation (SpO2) levels in the blood and send the data to a mobile application using Bluetooth. The main objective is to increase affordability for regular people. Besides sustainability in the context of finance, patients will have easy access to personal healthcare. The use of these devices as support tools by the general public in a certain situation could have a big impact on their own lives.

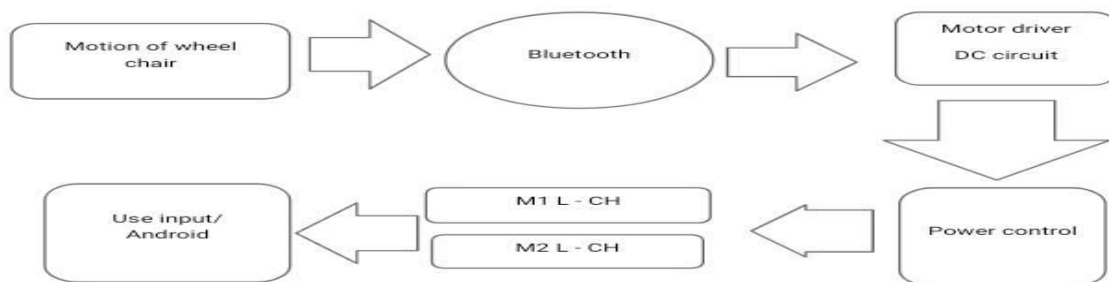
KEYWORDS: Arduino; Nano; Controller; ATmega328;

I. INTRODUCTION

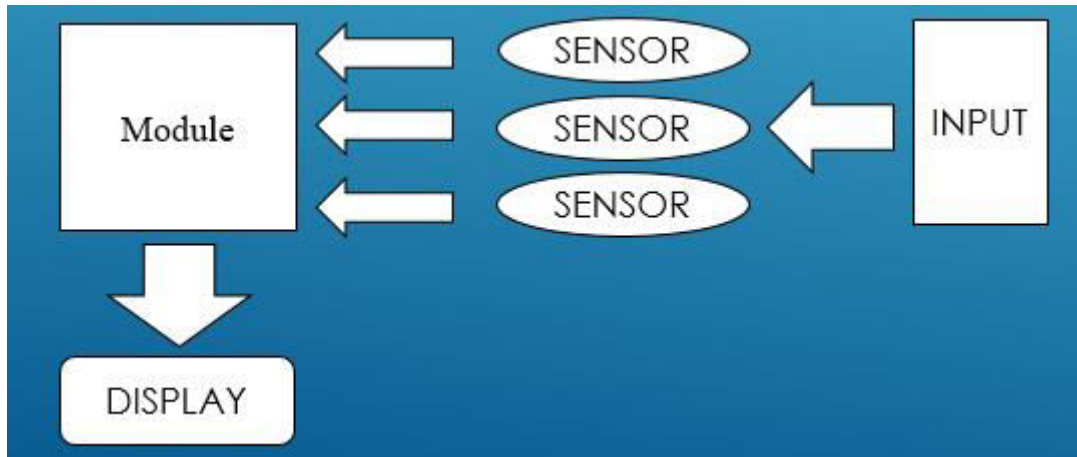
Technology has been evolving with leaps and bounds so nowadays we can do anything we want even staying back at our homes. On one side it has helped many people and on the other side it has created major problems. Technology has made us more independent. We don’t need to depend on others for majority of our work. We simply can refer to internet or use various gadgets. Keeping that in mind

we have made a project that will make disabled people more independent and will monitor their health system. In a very simple language, a wheelchair is a machine with wheels enabling easy movement, which empower a physically disabled person to move around with less dependency on others. People have disabilities with their hands, feets, lower extremities which puts a limit to perform regular task in their daily life. Still these wheelchairs have not satisfied the needs of the disabled people. It is therefore crucial that problems are understood in detailed and accordingly sensors should be equipped, hence this paper is a result of the needs and includes development of a multifunctional chair. The Smart Wheelchair can be easily controlled by the user because it is equipped with motors and two directional switches. This allows the user to control the wheelchair without any hard effort. The health monitoring system attached with the wheelchair will keep the doctors of the patient informed about their health status.

II. METHODOLOGY



(a)

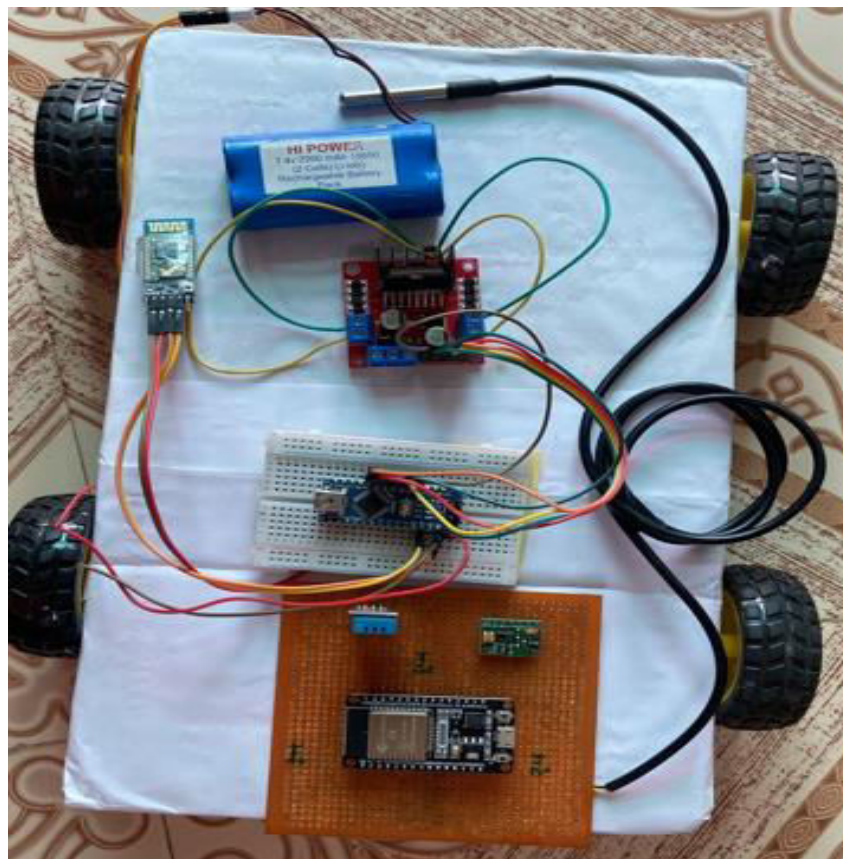


(b)

Fig. 3. (a) Health Monitoring System block diagram (b) P block diagram of Health Monitoring System

III. EXPERIMENTAL RESULTS

After a success completion of circuit & connections as per the circuit diagram, when we apply the command through android motion sensors get activated via Bluetooth, and each sensor gets activated for a health monitoring. As per command the motor drivers follows the same and works according to it.



(a)

Fig. Printed Circuit Board (a) Health Monitoring System

IV. CONCLUSION

The main motive of our project is to serve people who spend their entire life on wheelchair. Keeping the cost in mind we designed a chair for any person who already owns a wheelchair. By giving a little extra he/she can use all the features of the chair. This smart wheelchair will make them more independent than before. They can do their work all by themselves, they won't be needing an extra hand to help them out in every task. With the Bluetooth feature the user can control the chair from the phone itself easily as if it's like controlling a vehicle in a video game!

In such a pandemic situation where people cannot step out from their houses, it's really difficult for people who rely on housemaids or house servants. This chair will give their freedom back and will also keep the user safe through the health monitoring system.

If the user is an older citizen and his/her children live abroad for work related stuff, then this chair will definitely help their parents. They'll be able to keep a track on the user's health even from another city or country. So, if an emergency occurs the user can immediately be taken to the hospital and treated. This will increase the chances of saving the patient by a greater number.

There are many wheelchairs available in the Indian market but they are either not smart or do not offer any health care features and on the other hand our Smart Wheelchair does both the job. It is easy to handle and operate with, the user doesn't need any prerequisites regarding the wheelchair. It's fairly easy to cope with the controls. Keeping every section in mind we used the least costly products possible so that the overall price looks good and anyone can afford it. We really hope our idea gets recognized because many of my known use wheelchairs and they need extra help which gets irritating sometimes. So this smart wheelchair can help many people around India and the world.

REFERENCES

- [1] Vasundhara, G. Posugade, Komal K. Shedge, Chaitali S.Tikhe (2012) "Touch Screen Based Wheelchair System", International Journal Of Engineering Research and Applications, Volume 2, Issue 2, MarApr-2012.
- [2] Archana Hule, Rekha Bandage, Pratik Shah, Rashmi Mahajan (2015) "android based application for wireless control of wheelchair", International journal of research in Engineering and Technology (IJRET), Vol-4, Issue- Apr, 2015.
- [3] Jayesh, K.Kokate, A.M.Agarkar (2014) "Voice operated wheelchair", International Journal of research in engineering and technology, Volume 3, Issue 2, Feb-2014.
- [4] Tuck-Voon How, Rosalie H Wang and Alex Mihailidis (2013) "Evaluation of an intelligent wheelchair system for older adults with cognitive impairments", Journal of Neuro Engineering and Rehabilitation 2013.
- [5] Pramila Kupkar, Prajakta Pandit, Nikita Dhamdhare, P.P Jadhav (2016) "Android Controlled wheelchair", Intelligent Control and Information Processing (ICICIP), Imperial Journal of Interdisciplinary Research (IJIR) Vol-2, Issue-6, 2016 network,2017
- [6] P.Suthal, S. Prabhu, A. Stephen paul (2013) "Multi Technology Based Controller for Wheelchair Locomotion", International Journal of Engineering and Innovative Technology (IJEIT) Volume 2, Issue 12, June 2013.



INNO SPACE
SJIF Scientific Journal Impact Factor
Impact Factor: 8.423



ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA



INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

9940 572 462 **6381 907 438** **ijirset@gmail.com**



www.ijirset.com

Scan to save the contact details