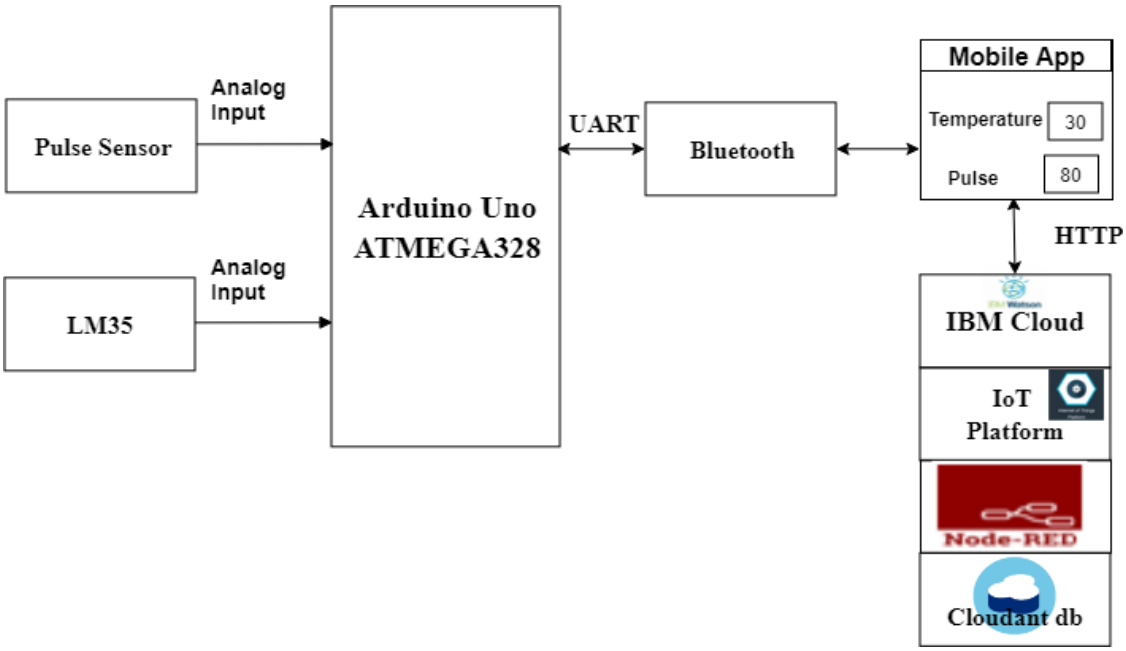
Smart Health Monitoring System For Elderly People Using IBM Cloud

INTRODUCTION : The Internet has enabled many machines and devices we use in our everyday life to be monitored and controlled remotely through the Internet of Things (IoT) technology. Thanks to the IoT technology, smart health application sector is swiftly expanding. This project monitors the health and thus enable us to take care of our loved old ones. This device aids us to know their health status by tracking their body temperature and pulse rates.

LITERATURE SURVEY : In this age of high competitiveness and rat race, everyone is busy with their work or friends. The generation gap, unhealthy lifestyle and a swarm of adulterated food in the market, has compromised our health tremendously. Nowadays no one is taking care of their health and that of their family members, especially elders. It should monitor their health status, to obviate any health issues. So, we proposed this project by which they can monitor their health by equipping themselves with this wearable device and hence monitor their body temperature levels and pulse rate.

THEORITICAL ANALYSIS :



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SKILLS REQUIRED : Python, IBM Cloud, IBM Watson, Node-Red.

EXPERIMENTAL ANALYSIS : Keeping a record of the health condition of the patient at home is challenging. Especially old age patients demands to be observed regularly. Their adored one's need to be updated about their health status from time to time while at work. So we come up with this project.

With the onset of the Internet and Computers, Information Technology has developed into a dominant tool to aid medical issues. IBM Watson is one such initiative by IBM, which presents integration with any application to build IoT device. The strength of IBM Watson is its data analytics and AI services.

The remote Health Care System uses these concepts to come up with a structure for enhanced quality of life for older people in our society.

RESULT : We can use the proposed system of patient health monitoring in emergency situations as it regularly monitors, records and store data in a database. The patient's geriatrician and family members will receive an alert message instantaneously as the health of the patient degrades. In life and death situations, even a minute saved by this technology can save the patient's life. In future we can combine the IoT device with the cloud computing so we can share the database in all the hospitals for the intensive care and treatment.

ADVANTAGES AND DISADVANTAGES : Advantages of this project are:

Ease of access to patient data, the ability to deliver higher-quality care to more patients with a lower risk of burnout — and for healthcare providers — lower costs and higher efficiency

- Better access to healthcare

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- Improved quality of care
- Peace of mind and daily assurance

Coming to the threats and disadvantages of using connected devices in healthcare are as follows:

Security and privacy: Security and privacy remain a major concern deterring users from using IoT technology for medical purposes, as healthcare monitoring solutions have the potential to be breached or hacked

CONCLUSION : With this proposed system we can take care of our elders and family members. The global coronavirus pandemic has spread to 187 countries and territories, infecting more than 4.17 million people. It I very challenging for most countries, especially with a lack of hospital beds and facilities to cater to every patient infected with the virus. By the help of this system we can monitor their body temparature and pulse rate in home isolation its self , so there is no necessary to hospital for checkup .

FUTURE SCOPE : Giving Patients and Caregivers Peace of Mind with IoT Monitoring

The stress of leaving sick and an elderly family member at home by themselves can affect the day-to-day life of their relatives. Many family members take time away from their jobs to take care of sick relatives because they worry about what might happen while they are away. However, with the help of IoT home health monitoring system we can automatically detect and report emergencies to caregivers. IoT home health monitoring will allow monitoring of patients vital health information through the use of wearable technology that tracks their condition. These wearables range from body temerature and pulse detectors. Also, the doctors would be able to prescribe them medicines by analysing their health status remotely without coming in close contact with them.

BIBILOGRAPHY : 1. Ashton, K, That ‘internet of things’ thing, RFID journal, 2009, 22(7), 97-114.

2.) Gubbi, J., Buyya, R., Marusic, S., Palaniswami, M, Internet of Things (IoT): A vision,

architectural elements, and future directions, Future generation computer systems, 2013, 29(7), 1645-1660.
3.) Evans, D., The internet of things: How the next evolution of the internet is changing everything, CISCO white paper, 2011, 1, 1-11.
4.) Zanella, A., Bui, N., Castellani, A., Vangelista, L., Zorzi, M., Internet of things for smart cities, IEEE Internet of Things journal, 2014, 1(1), 22-32.
5.) Ejaz, W., Naeem, M., Shahid, A., Anpalagan, A., Jo, M., Efficient energy management for the internet of things in smart cities, IEEE Communications Magazine, 2017, 55(1), 84- 91.
6.) Rahmani, A. M., Gia, T. N., Negash, B., Anzanpour, A., Azimi, I., Jiang, M., Liljeberg, P., Exploiting smart e-Health gateways at the edge of healthcare Internet-of-Things: A fog computing approach, Future Generation Computer Systems, 2018, 78, 641- 658.
7.) Thibaud, M., Chi, H., Zhou, W., Piramuthu, S., Internet of Things (IoT) in high-risk Environment, Health and Safety (EHS) industries: A comprehensive review, Decision Support .