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Department of Electronics and Communication Engineering

HX8001 - PROFESSIONAL READINESS FOR INNOVATION, EMPLOYABILITY AND ENTREPRENEURSHIP

IOT Based Personal Assistance for Seniors Who Are Self-Reliant

Domain of the Project :IOT
Batch ID : B12-6A2E
Team ID :PNT2022TMID13442
Academic Year : 2022-2023
Year/Semester : IV/VII

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Objectives

- The Internet of Things (IoT) is aimed at enabling the interconnection and integration of the physical world and the cyber space.
- It represents the trend of future networking, and leads the third wave of the IT industry revolution.
- To provide new means to understand the existing and emerging threats that are targeting the IoT based economy and the citizens' network.
- To research and analyse how can Blockchain contribute to improving IoT solutions.

Abstract

- IoT is a revolutionary phenomenon that transforms our life entirely as well as aims to revolutionize current healthcare into a more individualized, precautionary and inclusive approach to treatment.
- In order to integrate these two main problems, this research provides an IoT-ready approaches for elderly living treatment that can track and record critical details for patients in emergencies and include protocols for activating alarms.

Introduction

- A digital phenomenon that transforms our daily lives, boosts market efficiency and strengthens policy efficacy, the latest model is widely recognized as the IoT.
- At the time of the IoT, ordinary items are cleverer and assume an significant role in infrastructure surroundings.
- Powerful development activities in IoT-based healthcare software, facilities and innovations have been conducted over the past several years.

Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
Internet of things appications for elderly care	Samaneh madanian& Farhaan mirza 2021	Aging Clinical and Experimental Research	Increasing in elderly population put extra pressure on healthcare systems globally in terms of operational costs and resources
An IOT solution for independent elderly	Elena Borelli& Giacomo paolini 2019	IEEE Xplore	This paper provides a complete describtion of the HABITAT project in terms of methodology and smart objects development

Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
Smart Wheelchair based on IOT for Disabled and Elderly people	Anantha Rushitha Lakshmi& 2022	IJRASET	The main purpose of this project is to provide and increase the mobility of people who suffer from locomotor disability in their hands as well as their legs, and elderly people who don't have strength in their hands.
Essentials of IOT based healthcare for old aged people	P Beaulah Soundarabai & 2020	ADALYA	Digital health monitoring has taken the vital space in today's world and we are in a new age of patient care, monitoring and treatments.

Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
IOT based Health Care System	Kumar D & Ramkumar S 2019	ResearchGate	The aim of this paper is to design an IOT based architecture for health related issues such as Diabetics, Heart Monitoring system, to check body temperature, Pulse rate and kidney functioning
Smart Healthcare Monitoring using IOT	Shubham Banka & Isha madan 2018	International Journal of Appiled Engineering Research	Many such devices equipped with medical sensors are present in the ICUs now-a-days

Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
Design and Implementation of an IOT based Medical Assistant Robot	Md Anower Hossain & Md.Azad Hossain 2020	ResearchGate	This paper discusses in detail a proposed IoT-Based Medical Assistant Robot (Aido-Bot) that will be designed and implemented for the disabled and the patients in need.
An IOT based self patient's Health Monitoring system	Hitesh Kumar Sharma & Sahil Taneja 2019	IEEE Xplore	In some particular situations,it even becomes difficult for healthcare service providers to frequently check patient's health status

Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
IOT based wearable smart health band assistance	Kaveri Ramesh Dabhade & Himani jerath 2020	IJERT	Web is a significant piece of our life. It has empowered various gadgets to be checked, examined and control absent a lot of human mediation utilizing Internet of Things (IOT) Technology.
A Smart Real Time Health Monitoring Through IOT	Gowthami M & Isaiyamuthu I 2022	IJRES	Over the previous few decades, lifestyles have multiplied enormously.

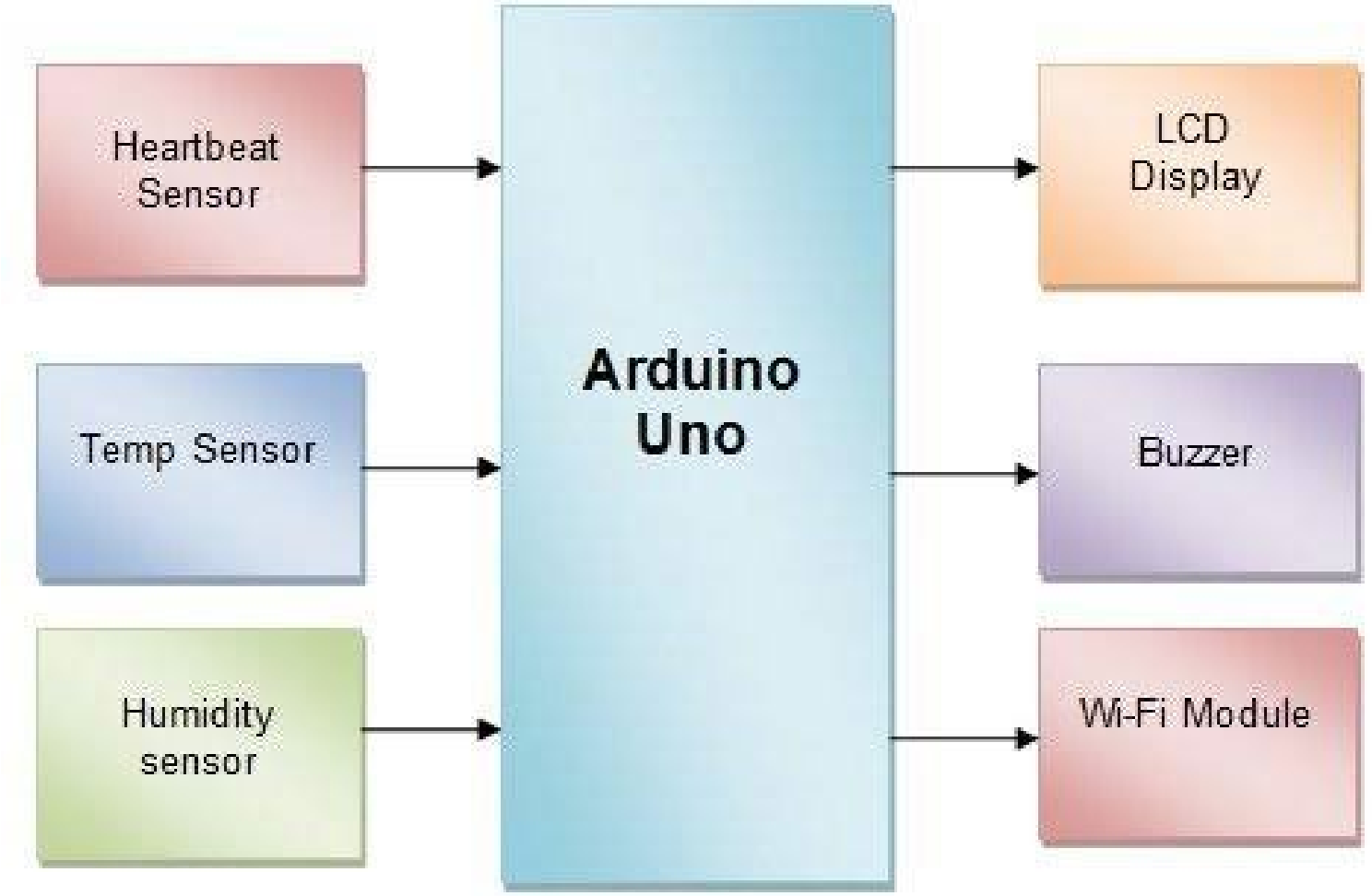
Literature Survey

TITLE	AUTHOR & YEAR	JOURNAL NAME	REMARKS
An IOT based health care system for elderly people	S.Pinto, J.Cabral & T.Gomes 2017	IEEE Xplore	The world is undergoing an unprecedented of the technological transformation evolving that from isolated systems to ubiquitous internet.
An IoT System for Remote Health Monitoring	Luis A.Duran-vega & Pedro C.Santana-Mancilla 2019	National Institutes of Health	With the increase in global life expectancy and the advance of technology, the creation of age-friendly environments is a priority in the design of new products for elderly people healthcare.

Problem Identification

- 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.
- Failure or bugs in the hardware or even power failure can impact the performance of sensors and connected equipment placing healthcare operations at risk.
- While IoT promises to reduce the cost of healthcare in the long-term, the cost of its implementation in hospitals and staff training is quite high.

Block Diagram



References

1. Abdi J, Al-Hindawi A, Ng T, Vizcaychipi MP (2018) Scoping review on the use of socially assistive robot technology in elderlycare.BMJ Open 8(2)
2. Abrams D, Russell PS, Vauclair M, Swift HJ (2011) Ageism in europe: Findings from the european social survey
3. Antonello M, Carraro M, Pierobon M, Menegatti E (2017) Fast and robust detection of fallen people from a mobile robot. In: Proceedings of the IEEE/RSJ International Conference on IntelligentRobots and Systems (IROS 2017)
4. Bajones M, Fischinger D, Weiss A et al (2018) Hobbit: Providing Fall Detection and Prevention for the Elderly in the Real World.Journal of Robotics 2018:1-20

References

5. Brooke J (1996) Sus: a “quick and dirty’usability. Usability evaluation in industry p.189
6. GalesM, Young S (2008) The application of hiddenMarkov models in speech recognition. Now Publishers Inc, Norwell
7. Grieco LA, Rizzo A, Colucci S et al (2014) Iot-aided robotics applications: Technological implications, target domains and open issues. Computer Communications 54:32–47
8. Grisetti G, Stachniss C, Burgard W (2007) Improved techniques for grid mapping with Rao-Blackwellized particle filters. IEEE TRobot 23:34–46
9. Clegg A, Young J, Iliffe S et al (2013) Frailty in elderly people.The lancet 381(9868):752–762Coradeschi S, Cesta A

Questions & Discussion

THANK YOU