TEAM ID : PNT2022TMID07000
PROJECT TITLE : PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF-RELIANT

TEAM MEMBERS :

1918109 - DHARSHINI B
1918112 - INDHIRANI S
1918115 - JAYAMEENAKSHI S
1918116 - JAYAPRIYA G
1918143 - VARSHINI S

LITERATURE SURVEY

SNo.	IEEE PAPER REFERENCES WITH AUTHOR AND YEAR OF PUBLICATION	ABSTRACT	ADVANTAGES	DISADVANTAGES
1	**Elderly Healthcare Assistance Application Using Mobile Phone** Andreas Handojo, Tioe Julio Adrian Sutiono, Anita Nathania Purbowo 2017	Feature to monitor the location of the elderly, remainder to take the medication, doctor appointment reminder, medical record records, emergency phone to family number or personal doctor, etc.	Home care service, send messages,speed dial contacts, elderly could send emergency (SOS) message only by pressing SOS button, GPS	Perform the reboot function on mobile phone then the mobile phone condition must be in root condition. Permission on android to use automated telephone answering it is only work starting from lollipop android version
2	**Home Tele-assistance System for Elderly or Disabled People in Rural Areas** Santiago Solorzano, Mateo Rojas-Ortiz, Ricardo-Armando Lopez-Molina, Jean-Michel Clairand, ´ David Pozo-Esp´ın, 2018	To improve the care of elderly and disabled people in a rural community, through a tele-assistance system implementation that connects with an emergency center in case of assistance needs.	Specially developed for easy use, portability and adapted to the GSM network available in rural areas. Emergency services and relatives can immediately receive the notifications of an incident and monitor the	No autonomous recognition of accidental events.

			situation, based on the containing geographical location and personal information of the elderly, until the problem is solved.	
3	**PAS: A Wireless-Enabled, Sensor-Integrated Personal Assistance System for Independent and Assisted Living** Jennifer C. Hou, Qixin Wang, Bedoor K. AlShebli, Linda Ball, Stanley Birge, Marco Caccamo, Chin-Fei Cheah, Eric Gilbert, Carl A. Gunter, Elsa Gunter, Chang-Gun Lee, Karrie Karahalios, Min-Young Nam, Narasimhan Nitya, Chaudhri Rohit, Lui Sha, Wook Shin, Sammy Yu, Yang Yu, and Zheng Zeng 2007	Used for tracking, fall detection, security and privacy; and results from our pilot study in a real assisted living facilities are presented.	Advances in networking, sensors, and embedded devices have made it feasible to monitor and provide medical and other assistance to people in their homes. Aging populations will benefit from reduced costs and improved healthcare through assisted living based on these technologies. However, these systems challenge current state-of-the-art techniques for usability, reliability, and security. The PAS open architecture for assisted living allows independently developed third party components to collaborate.	No speed dial, No suggestion of nutritions.
4	**PERSONAL ASSISTANCE FOR ALZHEIMER'S PATIENT** Kalpana Devi.S, Amirthavarshini	The features include face recognition, wandering and fainting detection,	Fall Detection, Face Recognition, Reminder System, Wander Detection,	The shortcoming is that it doesn't provide assistance for Alzheimer's patients who

	D2, Anbukani RS3, Bhavatha Ranjanni S4, . 2020	assistance to find a way home, reminders to daily chores and past life, organizing , and planning jobs.		has reached the final stage of Alzheimer's disease.
5	**Personal Health Assistance for Elderly People via Smartwatch Based Motion Analysis** Rainer Lutze Dr.-Ing. Rainer Lutze Consulting, Klemens Waldhör FOM 2017	A new approach is presented for a personal health assistant for elderly people utilizing smartwatches. On the smartwatch, an app featuring an artificial neural network (ANN) analyzes the motion patterns of the smartwatch wearer.The ANN recognizes health relevant events and activities of daily living (EDLs, ADL).	The unobtrusive presence of those data on the wrist will support better self-management of the widespread diabetes mellitus type 2.	The sensitivity of the individual model will require a substantial retraining even in cases of a smartwatch model change or even a major OS update.
6	**Voice Controlled Personal Assistant Robot for Elderly People** Jishnu U K, Indu V, K J Ananthakrishnan, Korada Amith, P Sidharth Reddy, Pramod S 2020	Voice communication between the robot and Android smartphones are done via Bluetooth. The proposed four-wheeled robot consists of a camera and robotic arm. The camera is used for object detection, distance measurement, and a robotic arm to perform pick and place actions.	Helps for both physically challenged & elderly people using robots by controlling through voice control	Limitation is that no consulting of doctors during emergency conditions, only helps in daily life not in risk of health issues

7	**A Smartwatch Software Architecture for Health Hazard Handling for Elderly People** Rainer Lutze, Klemens Waldhör 2015	The approach uses a software architecture for smartwatches support- ing and securing the everyday life for the elderly people	The developed conceptual framework and layered architecture is well suited for coping with the handling of specific health hazards for elderly people wearing smartwatches	The modeling of these experiences gained indeed requires frequent updating,adjustments and amendments of the formal description of the processing in the USMs to be done with economic effort.
8	**An Ambient Assisted Living System for Elderly Assistance Applications** Luca Mainetti, Luigi Manco, Luigi Patrono, Andrea Secco, Ilaria Sergi, Roberto Vergallo, 2016	An Ambient Assisted Living (AAL) works to create better living conditions for older or disable people. AAL systems are able to continuously monitor the health status of the elderly through data coming from heterogeneous sensors.	This system is able to guarantee important features such as continuous monitoring of the elderly locomotor activity and sensing of environmental parameters. In this way, the system can trigger specific events (e.g., to notify family members or medical staff) when particular dangerous situations occur (e.g., fall detection).	The premise is that often in AAL systems a single source of data is not sufficient to detect useful information to describe health state of the monitored person.

9	**Smart Monitoring Service Through Self Sufficient Healthcare Gadget for Elderly** Rowshni Tasneem Usha Fariha Sazid Sejuti Samiul Islam 2019	A remote health monitoring system focusing on the general well being of elderly people. The system provides several functionalities such as a wearable gadget to monitor the overall health condition of the patient and an android application software for relatives involved in eldercare.	The proposed system includes the features : Patient's general health condition monitoring. •Portable gadget with Simple button functions and display. • Motion tracking, Location tracking and Geo fencing. • Medicine Reminder and Refill alerts. • Emergency distress notifications •Communication services with relatives and doctors. •Patient's activity record in app.	Some of the areas of improvement missing in this system: -This system can be integrated to provide mobility to the elderly which is not included in the proposed system. -With the help of sensors, the system will calculate and determine how the room condition should be for comforting the patient's situation. The data will be transferred locally to a home WiFi system and automatically adjust light, fan, air conditioner
10	**eButton: A Wearable Computer for Health Monitoring and Personal Assistance** Mingui Sun, Ph.D.1,3, Lora E. Burke, Ph.D., R.N.2 , Zhi-Hong Mao, Ph.D.3 , Yiran Chen, Ph.D.3 , HsinChen Chen, Ph.D.1,3, Yicheng Bai1,3, Yuecheng Li1 , Chengliu Li1,3, and Wenyan Jia, Ph.D. 2014	Besides healthcare, mobile devices have not yet been designed to fully benefit people with special needs, such as the elderly and those suffering from certain disabilities, such as blindness. This paper presents an overview of research on a new wearable computer called eButton.	eButton is a complex miniature computer with a powerful CPU and an array of sensors for data collection. Diet and physical activity evaluation, sedentary behavior evaluation, and assistance to the elderly and blind.	In wearable design, a power supply is always a critical issue since the battery often has a dominant effect on device size and weight. In order to support automatic operation, the "big data" problem of the wearables must be solved. The multimodality data, including image sequences and waveforms, require a tremendous processing power