Utilization of IoT to Develop an Automation System for Disabled People

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Abstract

The paper focuses on finding a solution related to Internet of Things that can be used effectively for the disable people. Disable people face difficult in performing their day to day activities, the research is deriving a technique that will be used to help them. Various methods and techniques were studied and an effective solution was decided that will help them in spending their day to day life. The seeker of research noticed the problems in real life and came up with solution to that. Different research methods were used for deriving it. Different Questionnaire were also distributed in Old Age houses also to find the problem that Old people face, as most of old people are also not able to perform their basic day to day activity and can be classified as disable technically, so that the research remains practical and helpful for mankind.

Keywords: (IoT, Automation, and Disabled People)

1. INTRODUCTION

Handicapped individuals have been denied of innovation throughout the year and on account of their failure to utilize the innovation in a helpful way they stay not able to appreciate the simplicity in their life. We expect to make a useable framework in light of IOT that will cripple individuals in their lives.

Nowadays very nearly 90% of the total populace is utilizing the Internet as a part of one way or the other (Miorandi, 2012) and with the continually expanding utilization of Internet, the world is currently advancing to another utilization of Internet that is going to reformed human way of life.

A standout amongst the most energizing word nowadays is Internet of Things. Everything in the coming future is IoT that won't just change the world yet will change over it into virtual Objects with insight.

Internet of things goes route back to 1970 when it was utilized as Embedded Internet. Be that as it may, in the previous 5 years the term has picked up a ton of open intrigue and in the coming years, it will be in everything from the device we wear to the vehicles. A well-known site characterizes the term as:

"Sensors and actuators inserted in physical items are connected through wired and remote systems, regularly utilizing a similar Internet Protocol (IP) that interfaces the Internet".

We found the comparison of Google Trends between a couple of important terms demonstrate that IOT is getting more acclaimed than the other comparable terms.

With the developing innovation and expanding expectations for everyday comforts step by step. Internet of things is the fate of control and observing. It is such a mix of installed framework and Software that the client can control everything without exception utilizing their product, particularly Android Application for our situation.

The term "Smart" is found nowadays with everything. Advanced smart mobile phone, Smart TV, and Smart Appliances etc. With the expanding innovation, there is a substantial merger and cover of an exploration explanation and issues.

Much work is being done in various parts of the world about Internet of things. European commission who has been chipping away at the activity since 2005 (J. Buckley, 2006) presented "Web Connected Objects". This intended to concentrate exclusively on the application of big business frameworks.

2. RELATED STUDIES

Text The IoT is ushering in a societal uprising: anything and everything can now be connected. While industrial applications like remote management and monitoring have been present in manufacturing for decades (General Electric, in particular, has over the years developed some standards for industrial uses), the consumer-oriented IoT is a new phenomenon, enabled by the miniaturization of devices, the emergence of the internet as a favoured communications method and the proliferation of powerful and smart mobile devices.

- Devices: with miniaturization of sensors and captors
- Network: through a radio signal, wireless Internet, etc.
- Applications.

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Eventually, scaling down will permit any protest to be associated, which could have considerable constructive effects for people with incapacities as more items can be controlled from available registering stages.

The quantity of associated gadgets is set to detonate from 4.9 billion this year, as per the Gartner Group, to twenty-five billion or even fifty billion by 2020.

The solution to the problem this research focus arises from the daily world around us. The disable and old people who are given less privilege in our world and remain dependent on other for performing even your day to day life activities, like switching on a light, changing speed of a fan etc.

People with disabilities were are not able to get maximum out of evolving technology. Technology is introducing new things day by day but inventions for the disable people are near to none, this brings a huge gap for giving them the life they require.

This research focus to make a useable and effective solution that can help disable and old people in achieving their day to day goals. The focus not to just bring up a theoretical research but to design a working solution that can be implemented and used in daily life

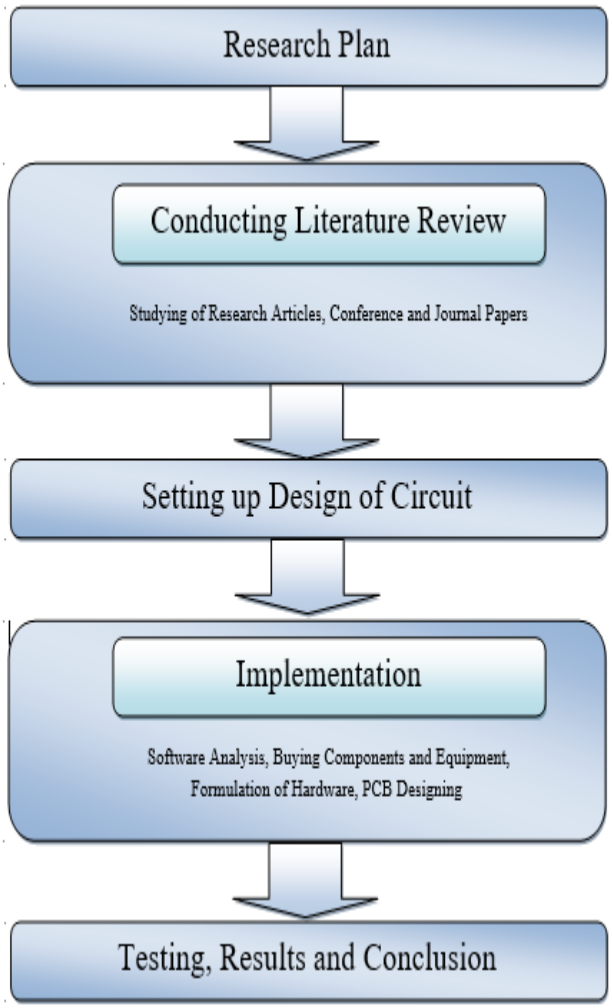
For some disable people performing day to day activity is depended totally on others, this research tries to provide an answer for that with a customizable and useable solution, using Internet of Things as a model of design and all the implementation and structure will be based on IOT.

This paper discuss the point is to empower the interconnection and incorporation of the physical world and the internet.i.e., extra wide-ranging interconnection, additional concentrated info perception, and more inclusive intellectual facility. Also, this paper will give an organized way to deal with creating and planning a shrewd framework. Efficiently screen advance towards an objective and measuring execution and distinguishing open doors for development

3. RESEARCH METHODOLOGY

Figure 1 below represents the paper research methodology.

Figure 1 Research Methodology



4. RESULTS AND DISCUSSION

Re This chapter exhibits the results showing the successful completion of the project. We were able to flourish develop and design the home automation system with an intelligent coordination. All the project deliverables were achieved with excellence. The project modules including the panels, security, and the universal adapter were designed optimally. As the aim of the project was to facilitate the disable and physically challenged people by the use of IOT concept. Hence, the prototype developed in the scope of this project is a plug and play module that can be operated just with touch operations.

The project deliverables were:

- An automated door lock system was established with the cooperation of IP camera
- Development of efficient automated universal adapter
- Power switches were designed for the automation of air conditioning
- Automatic Water Tank fill

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