

# Smart Gadget for Women Safety using Internet of Things and Artificial Intelligence

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## ABSTRACT

*Nowadays, women and children safety is a prime issue of our society. The counts of the victims are increasing day by day. Applications extending from keen administration, savvy training, brilliant horticulture, shrewd human services, savvy homes and so forth can utilize IOT to viable conveyance of administrations without manual intercession in a more powerful way. The paper presents the future challenges of IoT, such as the technical (connectivity, compatibility and longevity, standards, intelligent analysis and actions, security), business (investment, modest revenue model etc.), societal (changing demands, new devices, expense, customer confidence etc.) and legal challenges (laws, regulations, procedures, policies etc.). The GPS which will help to detect location of the device and also send alert messages and email to guardians, relatives and police station. In this proposed the IoT (internet of things) based device which will help to continuously monitor values of different sensors and GPS used in device.*

## I INTRODUCTION

Internet of Things (IOT) manages billions of smart objects which would be associated with sense and gather the Information and furthermore speak with encompassing individuals utilizing portable, remote and sensor innovations. In today's world, women safety has become a major issue as they can't step out of their house at some times due to physical/sexual abuse and a fear of violence. Even in the 21st century where the technology is rapidly growing and new gadgets were developed but still women's and girls are facing problems. An advanced system that can detect the location and condition of person that will enable us to take action accordingly based on electronic gadgets like GPS (Global Positioning System), LCD (Liquid Crystal Display), body temperature sensor, pulse rate sensor and IOT. It just depends on perspective like technology. For instance house security frameworks educate you to open the entryway with help of associated gadgets (IoT). Among many IOT applications, keen homes assume an important part in acknowledging brilliant urban areas. Shrewd homes can be utilized for remotely checking and controlling electrical apparatuses fitted inside the home utilizing keen and clever physical framework.

## II RELATED WORK

Women's security is a critical issue in today's world and it's very much needed for every individual to be acting over such an issue. For example proposes a framework that enlisted people wearable sensors to gauge different physiological. Artificial Intelligence can create programs on shrewd machines that work and think brilliantly, similar to the way people can think. Wearable technology which are electronic devices use in fashion wearable or some wearable devices, are smart electronic devices. The smart devices use microcontrollers, different sensors, microprocessors, and storage parameters, for example, circulatory strain and body temperature. Using a comparative cloud. IOT based home robotization utilizing minimal effort android telephones in Indian setting. The software is programmed in such a way that it uses the GPS of the smart phone to track the co-ordinates and monitor the

movement for easy track ability! The help message is sent to the family members and the nearest police station through the IOT facility that is inbuilt in the IOT. The software also provides a social platform where the people who have this particular software installed get the messages instantaneously so that they too can contribute in justice being delivered just in time. This feature is executed by using internet facilities of the phone of the user. The primary reason behind such shocking statistics is the society which is prejudiced against the girl child, lack of proper policing, ineffective laws, etc. While the long term solution should aim to correct the above factors. Now there is requirement of some changes. By observing such bad conditions of woman in the world we are designing and developing this project. This project has the potential to help the woman by the technologies used in it. In this project we are designing a device that can be used by woman for help in emergency situations as it can send information to family members and to near police station.

### III FUTURE OF IOT WITH ARTIFICIAL INTELLIGENCE

The uncertainty and business risk is always present in any new technology. In case of IoT, it is observed that many of the dangers are physically not present somewhat they are distorted or misstated. While it will take time to develop the IoT vision fully, the building blocks to start the process are ready to be used. The major requirements such as - hardware and software assets are either available in a less quantity or some of them are under development; it is also a fact that: the security and confidentiality concerns of IoT devices are not properly addressed over past decade. Artificial intelligence is software or a computer program with a mechanism to learn. It then uses that knowledge to make a decision in a new situation, as humans do. The researchers building this software try to write code that can read images, text, video or audio, and learn something from it. Once the machine has learned, that knowledge can be put to use elsewhere. Real-world use cases of artificial intelligence combining with the internet of things. Potential future applications in industry and for consumers. A brief glossary of basic AI and IoT terms, with links to credible references.

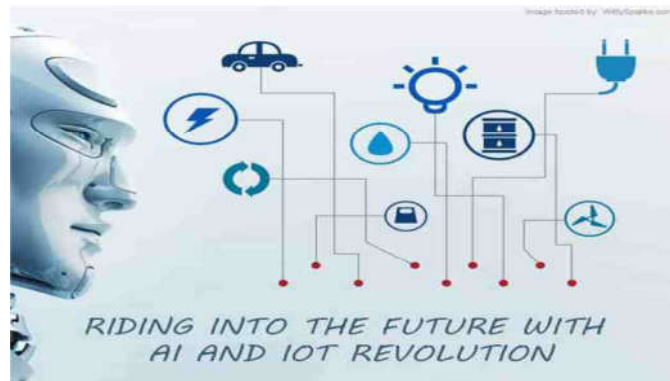


Fig: Future of IOT

### IV IMPLEMENTATION DETAILS

In this paper, the idea of home mechanization utilizing IOT is acknowledged utilizing 10w cost smaller scale controller based Arduino board and an Android cell phone. Arduino is an open source stage that can be utilized for prototyping any equipment. Global system for mobile communication is a globally recognized standard for digital cellular communication. It is mainly developed for carrying voice traffic. In this 51 frame and 26 frame structure is used. The maximum data rate supported is 9.6 kbps. The GSM provides the communication between the microcontroller and user by means of message. It uses TDMA to split the frequency into time slots. In GSM network more than one mobile user can use the

same frequency channel. GSM phones makes use of SIM card to identify the user account. Wearable innovation is a blanket term for hardware that can be worn on the body, either as an accessory or as part of material used in clothing. There are numerous kinds of wearable innovation yet the absolute most mainstream gadgets are movement trackers and smart watches. Artificial intelligence means even bigger automation in a smart home. Since the entire idea of connected objects is to make a life easier, more automation sounds great. On top of that, AI can make life in smart homes even more pleasant. AI systems can “learn” your mood and preferences, as well as analyze your interaction with home objects. With such knowledge, it can adjust temperature for both heating and cooling, adjust lighting, put on the music you like and close or open windows depending on the weather. The idea of the use of artificial intelligence in the Internet of Things is associated with another issue. It is the fact of independence of the machines in the context of their supervision. Application of AI methods can affect in a positive way to save the time. It is important not to lose a control over the device completely, but equally important is the lack of monotonous supervision of these applications from the point of use. The main element associated with the operation of IoT system with the artificial intelligence is its location in the architecture. There are three main elements in the flow of information:

- Preliminary communication – data sent from the real world for a variety of systems.
- Context communication – data processed by systems that already have the appropriate context and make the IoT systems and devices can respond accordingly (take appropriate decisions).
- Internal communication – understood as an additional channel of communication between intelligent objects.

### **i. Security**

IoT has happened to cause major security issues that have grabbed the attention of various public and private sector companies of the world. Adding such a massive number of new hubs to the systems and the web will provide attackers with a larger platform to invade the system, particularly as many experience the ill effects of security holes. Indications suggested that the malware captured infinite number of IoT gadgets that are being used in basic applications like smart-home devices and closed-circuit cameras and deployed them against their own servers. An Artificial Intelligence (AI) approach suitable for IoT in order to create such robots consists on the development of robots whose embodiment and situations in the world evoke behaviors that obviate constant human supervision.

### **ii. Social Networks and IOT**

Millions of people regularly participate within online social networks. In the usage of phone sensors to automatically classify events in people lives was investigated. Things in Social Internet Of Things (SIoT) are therefore intelligent objects that publish themselves as services and can be discovered through the network by searching through friends or in the neighborhoods, adapting the content to users. SIoT is therefore expected to have a great impact in the way people do things, for instance, i) people will not need to worry about leaving appliances turn on when they leave home (because these would understand that and would turn them-selves off); ii) if people have a misconfigured appliance, that equipment could communicate with other machines in the house or office to know the preferences of that particular user or company, in order to correctly configure itself; iii) these things detect malfunctions and call for assistance without human intervention.

## V CONCLUSION

The paper mainly focuses on the low cost implementation of the device which can save the life of the women in the critical condition the proposed system provides end to end security solutions for women safety using the advance technologies of IoT and AI. In some of the cases the system can provide useful evidences. Since the system can do audio-video recording of incidences which can act as the evidences. The crimes against women can be brought to an end with the help of real-time implementation of the proposed system. The system has been developed with such a motivation that it will leave no stone unturned to provide women with the safe environment under all the circumstances.

## VI FUTURE SCOPE

As the system is dependent on the user's discretion and judgeability of the situation (whether it is a guest or an intruder entering his house) the use of a camera connected to the micro- controller might help the user in taking decisions whether to activate the security system or welcome the guest As the system is dependent on the user's discretion and judgeability of the situation (whether it is a guest or an intruder entering his house) the use of a camera connected to the micro- controller might help the user in taking decisions whether to activate the security system or welcome the guest As the system is dependent on the user's discretion and judgeability of the situation (whether it is a guest or an intruder entering his house) the use of a camera connected to the micro- controller might help the user in taking decisions whether to activate the security system or welcome the guest As the system is dependent on the user's discretion and judgeability of the situation (whether it is a guest or an intruder entering his house) the use of a camera connected to the micro- controller might help the user in taking decisions whether to activate the security system or welcome the guest

This type of an idea being the first of its kind plays a crucial role towards ensuring Women Safety in the fastest way possible automatically. The proposed design will deal with critical issues faced by women in the recent past and will help solve them through technologically sound gadgets. As the school children safety are major concerns for parents as well as school management due to the recent incidents of child crimes like children missing, abuse etc. This module monitors the child safety when they are travelling in school buses. Once they reached the school the device gets deactivated by school authority and message send the parents that, "the child reaches the school safely". At return journey again the device is activated by school authority and when they reached the home, the acknowledge message is send to the school when parents deactivate the device.

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