Smart Wardrobe

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Abstract

People nowadays like to shop and buy clothes and the demand for clothes is never-ending. However, this leads to most of the clothes lying inside wardrobe for long time even up to several years. Smart wardrobe will help them to manage their clothes inside wardrobe. The smart wardrobe basically helps to keep a track of identification of clothes, the times we have worn them, color information all with the help of an RFID reader.

This concept is useful in big countries where generally there is high humidity where clothes may get molded or for countries having vast population because the more the population, the more can be the NGO's and urban-rural difference. This leads to a vast application of smart wardrobe in providing old clothes to poor households or through NGO's. in this paper we discuss the usage of smart wardrobe along with its applications and future scope.

Keywords: Clothes, Smart wardrobe, identfication, RFID reader

1. Introduction

Wardrobe which can suggest you which cloth to wear, notify you which cloth has been ignored. User can get suggestions on what to wear today from their phone app based on what events are there in their calendar and also the weather. The application will provide a dashboard to show that which cloth has been worn the most number of times and which has been never touched for long time. Application can further suggest user to sell it into second hand platform or make a donation for charity.

A. Purpose of our Project

Girls will tend to buy more clothes than their need and end up keeping the clothes inside the wardrobe for years but will never wear it. While buying clothes, girls will be controlled by emotions rather than rational thoughts. They will likely buy without thinking and thus end up paying more money and occupying more space of the wardrobe. Besides, living in the high humidity and warm weather country such as Singapore, new clothes can easily become mouldy and smelly. The idea integrated IoT units together with mobile app. It is not only an inventory tracking system but an established mobile personal inventory management system. With a better management of clothes, user has a better view on which clothes they wear the most frequent and at the same time which is least frequent. This may help them to further decide for those least frequent clothes with respect to lending them or make a donation for charity.

The main usage in practical life can be done in malls to manage the clothes. In this case it will not replace the employees so employment won't go but at the same time it would act as a helping hand to the employees.

B. Value Proposal

Nowadays RFID technology is becoming more mature and common. The usage of RFID tag has become very common and even printable using a printer. Also, the RFID reader module is becoming cheaper and at the same time providing better performance. This can greatly reduce the set-up cost of an inventory tracking system.

The system only requires one-time set-up and one-time registration of cloth, the rest of the process will be automated. Whenever user uses or wears a cloth, it will be tracked automatically.

Once the data is collected, it can be processed further and analyzed to give user suggestion on what to wear today, which cloth has been ignored etc.

C. Practical Concepts Associated with Smart Wardrobe

a) Personal Use

This concept simply helps user to understand what they need and helps them to save money regarding buying clothes or suggest them to make a better arrangement for their unused clothes (donate, exchange or sell). As a result, small investments brings user great savings.

b) Market Proposal

This concept simply helps employee to determine which type of cloth is kept at which place, in a particular wardrobe,which size cloth is kept in which section, etc. In short it gives a helping hand to the employees for managing and keeping track of the clothes. This helps to keep the record of clothes sold per day.
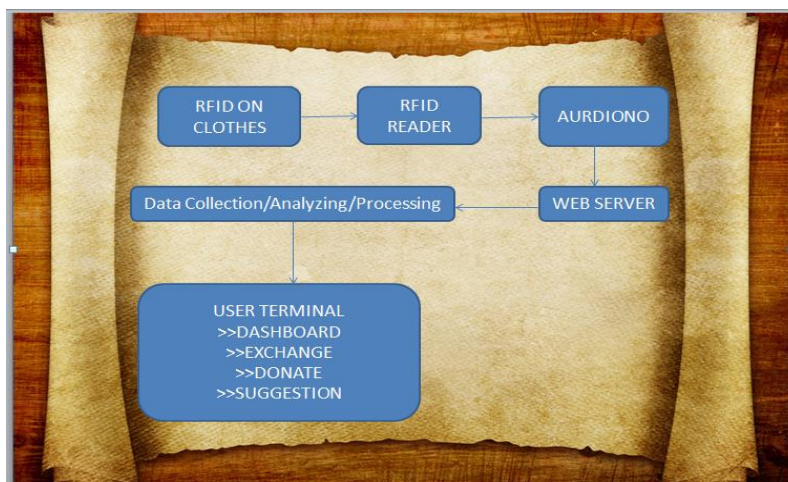
2. Flow of the Process

Figure 1: Flow of the Process

3. Working of the Mobile Application

Figure 2: Working

4. Technologies used for this Project

Table 1: Technologies used

Hardware components:	Software Components:
Arduino UNO	IOT
JT2850 RFID module	Web Servers
JT606 RFID antenna	Arduino IDE
	Arduino Studio

5. Future Scope

- This application will help user to sell it through second hand platform (NGO's) or make a donation for charity.
- Smart wardrobe will soon make everything regarding clothes simpler and easier (For Example: Removing creases) than it is now.
- **"Cloth care"** would be redefined through this application.
- Automated control would be obtained regarding clothes with the help of app-based personal assistants.

6. Conclusion

Some users are really into social networking and some are interested in smart wardrobe. The idea of this project is to connect social networking and recommendation and smart wardrobe together used for helping and answering people question about what to wear and what not to wear, what to buy and also get new information and recommendation from the server through looking at the tagging history.

This would really be a very popular topic in the near future due to the increase in use of smartphones as well as the swiftness with which the world is moving currently.

7. Acknowledgments

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