

ShopNDrop Using Smart Trolley

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Publication Info

Article history:

Received : 15 February 2020

Accepted : 26 May 2020

Keywords:

Recommendation system,

Seamless shopping,

Supermarket.

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Abstract

Present world is accelerating in various technologies and is having a rapid growth in population with extensive sphere of requirement for a range of products. Shoppers need to coordinate among themselves to buy variety of products in grocery store. It requires ample amount of time and composure, for a successful shopping as Grocery Shopping in supermarkets is becoming more tedious as there are many people who still rely on shopping in person. So we need to tackle this issue by aptly using our advanced technologies. Finding the items for our shopping list is quite difficult in a large supermarket. The advancement in internet of things (iot) brings the assurance of wide range of new recommendation systems. In this paper, we are planning to propose a smart cart shopping system. As a smart cart shopping system is necessary for shopping in grocery store for easy shopping. Thus a smart trolley with a recommending system is proposed. A portable system is fix under the trolley to lead the users to the items location that they plan to buy in the market and based on that it can recommend recipes & can predict the item and the ingredients required to make the recipe. The leading technology used in this proposed system is Internet of things, thus ensures the clients to have wonderful seamless shopping experience, is all discussed in this paper.

1. INTRODUCTION

Due to massive increase in computing power on small devices, nowadays, IoT has become a trend. It is swiftly and quickly advancing technology. The experience of going to a Super Market and buying the Ingredients & tend to forget the ingredients required for a recipe which leads to introduction of Seamless Shopping structure which avoids help to the customers in predicting the item to be purchased and recommending recipes for that item and also has additional features like to get place of the ingredients. The experience of going to a Super Market and buying the Ingredients & tends to forget the ingredients required for a recipe which leads to introduction of Seamless Shopping architecture refrains this drawback and it has some additional feature like to get place of the ingredients. Therefore, a smart cart system is proposed to resolve these issues.

Supermarkets have invested billions in product location, for its smooth service but need technology for providing the hassle free shopping to the customers. A cart is an essential appliance for shopping in any of the stores or markets. Still, their are shopping trolleys discarded in all places in supermarkets after its utilization. Further, there are shopping cart safety problems such as rolling off from a moving staircase as people are in hurry to find the desired product. It is well known to be an aggravation and time consuming for clients who are in a hurry to locate for

the required items in the store. [10]. A system is fix under the cart to lead the customers to the required items place that they have plan to buy in the grocery store or market.

The recipe recommendations of products are significant for many reasons. Accomplishing cooking or brewing insight with the help of any digital authority is now becoming famous; as are systems, which recommends recipes for the detected item and detects items in the grocery store or market. There are many research going on in this kinds of systems for many years, and have suggested people not only the means to locate food but also provide the help for nourishing themselves more actively [9].

Here the proposed system recommends the recipes based upon the item detected by the system. This scheme addresses the very common problem that customers face in the existing system. In the existing system the customers are not able to locate the products in the supply or sometimes are not assisted with an help. A market is a place where all the people come to buy their daily products and make payment for it. When people go to a shopping market for shopping, they have to work for choosing the proper item. Here the system will provide help the customers to locate the products at the proper inventory by providing the customer to input the desired product and to locate the place of the item in the store by that providing a wonderful experience for the customers.

IoT is used to increase the product sale at higher rates. It will be useful for those who is unable to remember or find the product while purchasing & don't have to seek the help of anyone. Seamless Shopping System is proposed to make a smart cart shopping interest simple, friendly, agreeable and efficient to the clients, it also makes supervising of the supplies more convenient and simple to the customer. The main objective of the proposed system is to provide a technology oriented shopping system, to enhance the overall shopping experience.

2. LITERATURE SURVEY

2.1. Predicting the item:

For a smart shopping system, to enhance the shopping experience for the user as there is a quick increment of gadgets and the plunge technologies. The role of IOT is very crucial discussing where the sensor and actuators adjust with the environment very easily. Keeping in mind the end goal the data is used over various stage in order to build a clear picture. Current trend is to empower gadget so that they can be used in everyday life to make life easier [1][3].

The paper[3] gives information of an automated as well as time saving system for retail to improve the shopping experience of the user. The main goal was to design a system which is user friendly. through this system it will generate a bill for the user.

2.2. Recipe Recommendations systems:

There is an similarity between a recommendation system and the information filtering system. According to paper "A Recipe Recommendation based on automatic nutrition information extraction" it utilizes information about nutrients on the internet and provides a goal oriented recipe recommendation system. The paper provides a concise of the advancement of food recommendation system which focuses on influential as well as the recent approach ,it also add specialization to recommendation system which indirectly improves the health of people[2].

The paper proposes is a goal-oriented recipe recommendation system which gives information about nutrition on the internet[7]. Whole world is connected to supermarket or grocery store for their daily essentials. There are unique user which share different recipe to make a dish on the web. Thus, subsequently the customers don't know about the every one of the recipe on the web. As well as the ides that we think of a recipe is unique for every person, thus it makes use of a collaborative filter[8]

In the last decade the main focus is on recommendation systems rather than content-based, collaborative and hybrid approaches. In the mid-1990s recommendation systems emerged. Now a day we find many real world applications on recommendation systems in order to find more products

or items for the user. The paper describes the recipes recommendation based on the culinary domain. Recipe involves the use of various ingredients, cooking , procedure. Thus we need to consider an aggregation of different heterogeneous features accourin to paper[9].

2.3. Searching the location of item:

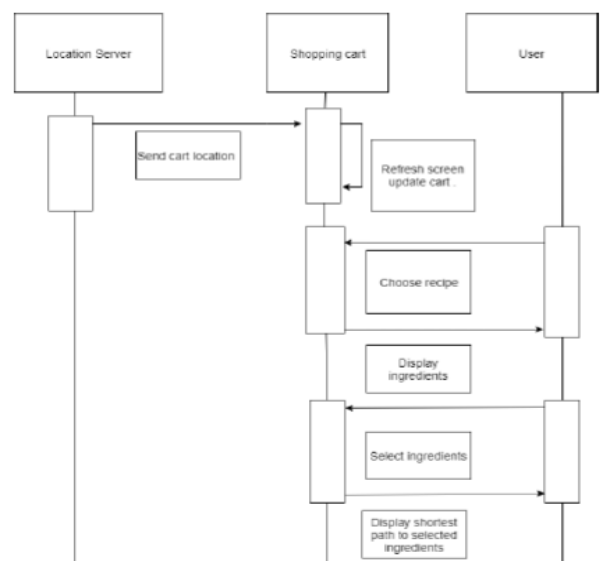
Dr Suryaprasad J in "A Novel Low -Cost Intelligent Shopping cart" planned a system which is cost efficient as well as which assist the customer to search and select the product in the wall mart which has offer available as they pass through the product[7].

There are various trolley safety issue such as sliding down an escalator thus this activity causes time wasting for an customer who are in rush as well as causes other customer incontinence .The paper proposed here has automated human which we call smart shopping system which help solve all problem. Here a robot is installed which help the customer to guide through the mall. Lastly, the GUI of android application is explained in this paper[4].

In this paper[4], a robot which work similar to human has been developed.

Here the main goal is to improve the bonding between human and robot . A robot can give services to humans as an associate in various kinds of situations. According to the paper, it depicts the reasonable and profitable smart shopping cart makes use of IoT (Internet of Things) innovations. This kind of activity is useful in super mart or wall mart which reduces the efforts of the customers. Cart-to-Cart communication helps customers to share their shopping list with other customer in order to enable parallel shopping making use of two or more carts . Making use of this help save time and makes shopping effortless[1]

3. FLOW CHART



4. CONCLUSION

In this paper we have seen the formula proposal is an critical space both for people and society. What the work portrayed in this venture appears is that in spite of its significance, formula proposal in comparison to other spaces is generally under-worked. The work that has been actualized to date appears that in spite of the fact that client taste forecasts for nourishment can be accomplished with existing strategies ,the execution accomplished is poorer than in other spaces. The Web of Things is one such innovation that interfaces different objects in a organize and could be a point of reference within the time of the savvy world. The iot based consistent shopping highlights these innovation empowering users to shop efficiently.As Web of things is the noticeable innovation that produces the world encounters a seventh sense. By the year 2020, around 1 billion objects will be connected in this way making the world savvy. The smart shopping framework is executed in such a way that it permits the client to input the specified fixing thatnder-worked. The work that has been implemented to date shows that although user taste predictions for food can be achieved with existing methods ,the performance achieved is poorer than in other domains. The Internet of Things is one such technology that connects various objects in a network and is a milestone in the era of the smart world. The iot based seamless shopping features these technology enabling users to shop efficiently.As Internet of things is the prominent technology that makes the world experiences a seventh sense. By the year 2020, around 1 billion objects will be linked thus making the world smart. The smart shopping system is implemented in such a way that it allows the customer to input the desired ingredient that he/she wants to purchase. Also, another interesting feature of this smart shopping cart is the searching the items place that helps the customers to shop easily. Thus Seamless Shopping system can be used in Super Markets to enhance the shopping experience for the user.

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