Advertising Vending Machine

Vijay Swaroop [1], Vinutha Yadav [2], Rakshitha C[3]
[1, 2, 3] Dept of Computer Science and Engineering
[1, 2, 3] Atria Institute of Technology/VTU, ASKB Campus, Anandnagar, Hebbal, Bengaluru, Karnataka 560024

Abstract- *Vending machines that are smart, attention-grabbing and does wonders for existing and new customers. These intelligent machines provide a range of products to customers using an attention-grabbing interactive multi-media display. Returning customers are recognized by the machine that uses analytics to create personalized offers in real time to up sell, cross sell and increase shopper basket value. Consumer Goods companies can offer a variety of convenient Advertising products for the One who is going participate in the Activity.*

Keywords- IOT,Sensors, Vending Machine,

I. INTRODUCTION

Vending machines are well known devices employed at various locations to store and dispense a vast array of merchandise, including beverages, snacks, video tapes and children's toys, in response to a customer request and appropriate payment. Vending machines provide numerous benefits to customers and operators alike. Vending machines typically provide customers with the convenience of self-service and twenty four-hour access. Likewise, operators benefit from the ability of vending machines to make automated sales of merchandise to customers, often at unconventional locations and times of day, without substantial labor costs. In addition, vending machines provide a convenient mechanism for product manufacturers to introduce and test new products. The benefits of vending machines to each level of the chain of commerce will continue to encourage their utilization by customers, operators and product manufacturers alike. However, the time that customers spend at a vending machine making a selection, providing payment and receiving a selected product, has not been effectively utilized. Applicants have recognized that such customer time may be utilized to participate in a marketing promotion, as described below.

Vending machines must offer efficient service with zero tolerance for human error, require no user training and be accessible to a wide range of users. User behavior analysis by product interface guides the user's behavior is the key to solving some practical interaction design problems.

This study based on Multimedia technology, evaluates the user experience of the multi-interface vending machines in light of recent research results in human computer interaction. Several design problems are identified and improvements are suggested[3].

IoT is transformative for digital advertising. All products, from a bottle of soda, to your watch, to your refrigerator, to your car will have the potential to serve media of one sort or another. Advertising will become highly personal and will be directed precisely at you. Today's moment marketing – whether it's Amazon recommending another book or an ad for a retail site you've just grazed popping up while you're browsing a news story – will seem primitive when your location, the time of day, and your physical condition are able to be factored in.

An ad for bottled water, complete with closest where-to-buy, could be shopping malls, metro/bus stations, airports, universities, traffic and uptown area etc., [1]. So, its benefits include (no need of human energy (reduction in man power as it doesn't need vendor)), flexibility in time, and time saving as distance between human and VMs is less.

Reward booter is a customer engagement activity at any experience zone where advertisers place their kiosks. This is a machine that detects various movements/aspects/actions of customers at the zone. The machine recognises heat that a customer brings out and vends either a branded merchandise, product or a ticket that can be redeemed later. Similarly The machine recognises strength of Voice that a customer make out if it crosses threshold value then rewardbooter vends either a branded merchandise, product or a ticket that can be redeemed later. similarly Theboot / machine recognises the steps that a customer make out in limited time if it crosses threshold value then machine vends either a branded merchandise, product or a ticket that can be redeemed later.Consumption has become an essential part of humanlife's basic routine activities, and machine based sales plays a vital role in today's busy life of our society. Machines are now dominating modern life style, and as vending machines are one of the machine based sales, so they are affecting human-machine relation in a positive way [1].Vending machines are the (non-vendor) machines [2] that provides edible and non-edible items such as snacks, beverages, tickets and coffee etc.,

and are breaking the limitations of locale and time, by providing its 24/7 services everywhere, with the consumption of 2,500 to 4,400 kWh power per year in best way possible. VMs are available in office buildings, prompted by the heat and humidity and your biometrics.

II. METHODOLOGY

The vending machine provides an immediate reward to the customer for participation in marketing promotions. In one embodiment, customers are rewarded for performing any three activities in best. In another embodiment, customers review a marketing promotion, and get their body fit by doing exercise.

A method for dispensing an Advertising product in a vending machine to a customer is:

- The customer should select the task that they wanted to participate.
- There are three activities (screaming, running, heating) in the vending machine every activities has the threshold values.
- Customer can select anyone of this activities to get the reward.
- If customer is choosing screaming he need to reach threshold value to get reward.
- If customer is choosing Running he need to reach threshold value to get reward.
- If customer is choosing increasing temperature by rubbing his hands, he need to reach threshold value to get reward.
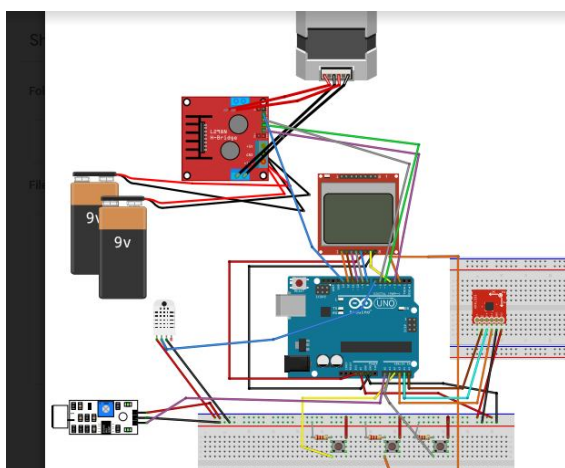- get reward.

Figure 1Circuit Diagram

For every activity there is a sensors which is connected to the Arduino which intern calculate rate of performance of customer then rotate the motor in order to

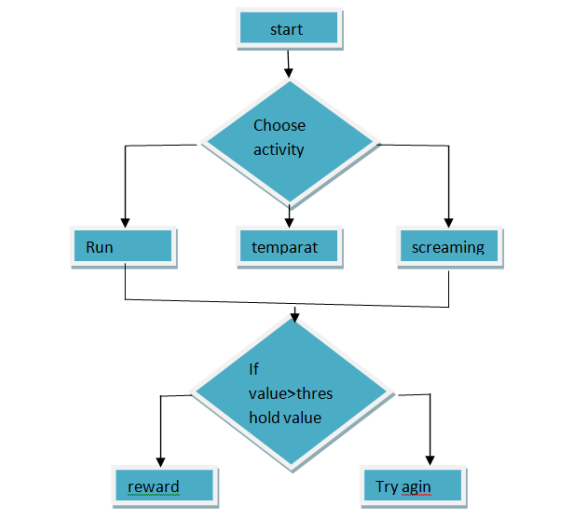vend the gift for customer. the circuit diagram is shown in above diagram(figure 1).

Figure 2 *Flow chart*

Above diagram shows the flow of interactive vending machine. list of some of the sensors andcircits used in this vending machine is accelerometer,   heat sensors, sound sensor, breadboards, counter motor ect.
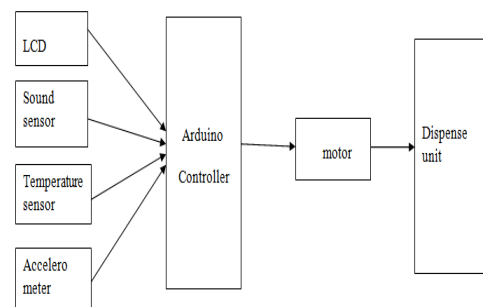

Figure 3Block Diagram

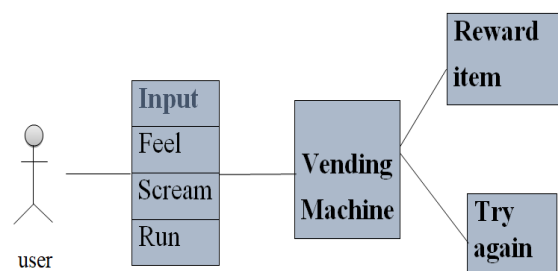The technologies used in vending machine are Embaded C,IOT, Some of the Libraries.

Figure 4Model diagram

III. ADVANTAGES

- Advertising the newly released products. Reduces the more investment on advertising
- Entertaining the people in bus stops and airports.
- Interactive in nature

IV. CONCLUSION AND FUTURE SCOPE

As Result of this projectpaper the people would be able to access the vending machine in order get rewards of new advertising products, this vending machine will take care of health issues my making person by running /jumping and creaming. This machine can be installed at bus stations, railway stations and streets of the city. Prospective customer survey / study has been planned in order to understand Indian users for such a machine. Block diagram would be detailed out for each block and module development would be started. Legaland administrative aspects would be studied for feasibility study and further changes in design. Further hurdles would be funds, timely resource availability & formation of think-tank team.

V. FUTURE WORK

Push button used to vend particular vending item can be replaced with a touch screen system. By increasing the number of stacks in the mechanical structure of vending machine, will increase the vending items capacity in machine. Current performance of this machine can be grown further in IOTs by using the web based system to store and process big consumer's data online.

REFERENCES

[1] G C. Wenshan, H. Yanqun and L. Minyang, "Influential Factors of Vending Machine Interface to Enhance the Interaction Performance," 2015 8th International Conference on Intelligent Computation Technology and Automation (ICICTA), Nanchang, 2015, pp. 486489.

[2] A. S. P. H. Navarro, C. B. Carlos and C. M. F. Monteiro, "User Centered Design of an Autonomous Mobile Robot Vending Machine Concept," 2016 International Conference onAutonomous Robot Systems and Competitions (ICARSC), Braganca, 2016, pp. 259-264.

[3] Ping Li*1,Cheng Li2A Study of Vending Machine Interface System and User Behavior on Multi-Interface Vending Machine Improved Design