IOT Smart Mirror with News & Temperature

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Abstract:

Future mirrors are considered to be smart mirrors. It is a part of connected world where it facilitates to view news, temperature, weather and more information while looking and grooming our self's in front of mirror every morning. Hence in our proposed system, these kind of mirrors allows to receive news online and display in the mirror screen. In addition to this it also displays current temperature, time and schedule. Therefore our system includes raspberry pi 3, based processor with a display to view information, IOT based circuitry and temperature sensor integrated together. To built the outer frame we utilize precisely modeled panel. We use a precisely modeled panel to construct the outer frame. Then we use specialized glass with a back frame to encase the system. The frame cavity is now fitted with precisely positioned mounts for the display housing to be fitted in the mirror. This is necessary to achieve the desired effect.

Keywords: raspberry pi3, raspion, LCD, internet of things(IOT)

INTRODUCTION

Internet of Things (IoT) is a biological community of associated physical items that are available through the web. The 'thing' in IoT could be an individual with a heart screen or a vehicle with inherent sensors, for example objects that have been doled out an IP address and can gather and exchange information over a system without manual help or intercession. The implanted innovation in the items encourages them to interface with inside states or the outside condition, which thus influences the choices taken. This idea of IoT has been utilized here alongside two distinct environments for example Android and Arduino. At last a computerized shading controller is to be created with the assistance of these.

Numerous gadgets are being created which use ideas of interactive

media correspondence, computerized reasoning, web of things (IoT) to upsetting the manner in which we play out our different everyday errands in our home, workplaces or even ventures. The greater part of us use reflects each day to take a gander at ourselves; we mentally connect with the mirror each day to check what we look like and how our clothing is while preparing for our work or schools. In this way, having an intelligent mirror that can react to your directions can energize anybody.

Proficiency and efficiency are two characteristics that are progressively setting up their predominance as catchphrases organizations are utilizing to showcase their items. The way that their item can perform various tasks or increment efficiency superior to anything the challenge has turned into a genuine moving point. This is because of the way that compelling time the board is a basic factor in expanding creation of everyday life. The best time the executives procedures include having the capacity to discover time where there was no time previously. Combination of innovation into individuals' day by day lives has made that time the executives conceivable. The utilization of items, for example, tablets, PCs, and cell phones have given individuals access to the devices should have been beneficial.

The smart mirror idea expected to incorporate innovation flawlessly into individuals' lives by putting it where everybody's normal in the long run impacts, the washroom. The objective of the savvy reflect is to build a client's profitability by sparing them time. The shrewd mirror gives a close easy ordeal that enables the client to simply stroll up and be welcomed with data.

IOT based Mirror aims at increasing the fundamental intelligent mirror with inserted insight to join every day schedule errands like perusing paper, getting stock updates, climate refreshes and so on and giving such information to the client while he/she prepares. The mirror will help in mechanizing our work and advancement of shrewd houses.

Objective:

The objective of this project is to make a mirror which does the smart things like it shows weather, date and time, News etc. Due to use of smart mirror time can be saved.

LITERATURE SURVEY

B. Cvetkoska et.al., (2017) describes, the savvy aides' emphasis is basically on fundamental human needs, for example perusing, planning, exploring and other comparable exercises. Be that as it may, very few keen associates are worried about the human wellbeing generally speaking. In this paper, we center on the likelihood of utilizing a savvy mirror to recognize

medical problems [1]. Another Smart eHealth Mirror display is proposed, that comprises of a brilliant mirror which chips away at its own calculation and carries on as keen aide. This proposed model uses confront acknowledgment verification, pose issue discovery, and legitimate stance direction, pursued with proposals for preventive medicinal services. The calculation distinguishes the individual's stance and cautiously investigations the stance and body changes after some time. The acquired outcomes from the investigation fulfilled our desires by enhancing the upstanding stance of the tried individual by impressive rate. The advantage of the proposed shrewd calculation is demonstrated by the assessment results, which enhanced with each new individual examination.

M. M. Yusri et al., (2017) presents the specialist accompanies a proposed framework called Smart Mirror. It is an idea of keen locally established Internet of Things (IoT). This framework enables clients to get to data and furthermore control the lights in the house [2]. Pertinent data can be followed, for example, time and date, climate, cautioning, traffic, and area delineate. The framework applies Sonus innovation as a mechanism of collaboration among individuals and frameworks. Thus, clients need to give guidelines to the framework orally to secure the framework's reaction. The methodological methodology utilized in this undertaking is The Evolutionary Prototyping which assembles all prerequisites and plans the framework in a fast strategy. A model is worked to assess and convey input. Upgrades will be made to improve the model, obliging client's fulfillment.

M. Rodriguez-Martinez et al., (2004) discusses the issue of serving such archives through Web administrations, with the objective of finishing the client's demand in least time (turnaround time). We propose a dispersed shared mirror framework, the Smart Mirrors System, which constantly gathers data from companions, so as to choose the best way to deal with follow in serving each demand [3]. The distinctive research issues being considered are: engineering of the framework, cost model to assess benefit time by every specific server, trade of metadata and administration demands among companions.

Yuan-Chih Yu et.al., (2012)., propose a prototype of smart furniture for the smart home-a magic mirror table. The proposed framework has a camera to catch the watcher's outward appearance. By breaking down the articulations, the framework can decide the feeling of the watcher [4]. In the event that the watcher is in a negative feeling, the framework, talks positive sentences and plays the watcher's most loved music to ease

his/her feeling. The trial results affirm that the framework can soothe the dismal state of mind of the watcher. Furthermore, the proposed framework can fill in as a schedule for occasion reminding.

S. S. I. Samuel (2016)., describes smart home is an associated home that interfaces all kind of computerized gadgets to convey each other through the web. These gadgets shape a home region organize where interchanges are empowered by various conventions [5]. As these gadgets are planned by various organizations with various benchmarks and advancements there is an issue exists in their availability. This paper goes for depicting the remote guidelines utilized in home system and how these conventions confront the availability challenges in the brilliant home system.

III.PROPOSED SYSTEM

This section describes, implementation of smart mirror using Raspberry pi 3. The way of information displayed in smart mirror and how it saves human time and at same times how it facilitates him/her to know current affairs, weather condition and other details.

Smart mirror:

The mirror will do the reasoning for the client with the assistance of an in-manufactured individual right hand. It will refresh with the client's logbook plan, daily agendas, news, and climate and so on. The data wouldn't be tossed in the client's face, yet subtly showed on the edges of the mirror to in any case permit utilization of the real mirror.

The utilization of individual collaborator will keep things straightforward and simple to utilize. No consoles to endeavor to keep dry and clean. The individual aide will likewise enable the client to even now utilize the mirror notwithstanding their hands are wet or grimy. The mirror gives regular data the vast majority check their advanced mobile phones or tablets for, for example, climate, news, time and calendars.

This enables the clients to peruse, think, and plan their day while preparing toward the beginning of the day or night. At long last, the mirror must be savvy enough to shield itself from the wet and moist conditions. It will highlight a mugginess security framework where it will screen the temperature and dampness levels close to the equipment.

Raspberry Pi 3

The Raspberry Pi is a small, credit card-sized computer that powers the whole thing, displaying the Magic Mirror interface and running Alexa, the voice-control system. The Raspberry Pi 3 is a single board computer which features a quad core ARM cortex A-5 processor,

with the capability to run Linux based operating systems. The Raspberry Pi 3 has an integrated LAN port which can be used to connect to the internet. It also comes with double row GPIO (General Purpose Input Output) pins which can be used for interfacing it with a variety of I/O devices. We will be installing debian-based Raspbian OS Jesse on the Raspberry Pi and download and install node.js for the packages.

The two-way mirror

The two-way mirror is made of acrylic and sits flush over the monitor, allowing the graphics on the monitor to come through while maintaining a mirror effect. I ordered my mirror through Amogh Aluminium. The thicker mirror option (3/16") to prevent a "funhouse mirror" effect.

The Monitor Display

An LCD monitor for minimal power consumption, maximum crispness, and to prevent mirror glow at night. The required information for the user will be displayed on the LCD monitor.

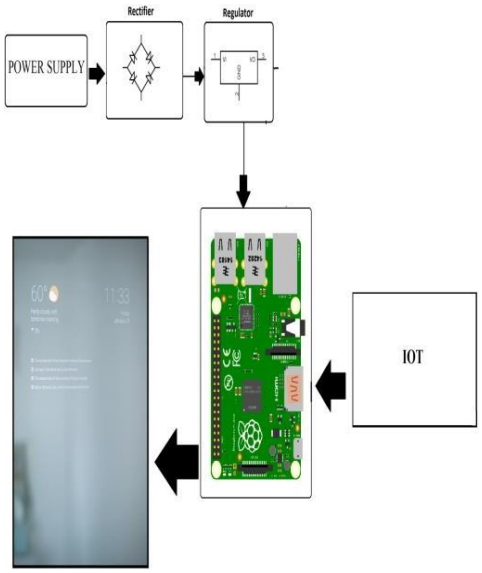

Fig 1: Block diagram for smart mirror

The raspberry pi 3 is used to connect with internet using IOT circuit through the use of a wifi module. This allows us to receive data through the IOT platform. We use in order to connect our system to the internet and get news feeds. The temperature interfaced on the circuit is used to display temperature and display it on the mirror fitted display. Thus we demonstrate a futuristic IOT smart mirror with news and temperature display.

Functionality:

Proposed model can perform different capacities depicted as pursues:

i) Work as an ordinary intelligent mirror with the goal that the client can utilize it as a normal mirror.

ii) A two way reflect which can work both as intelligent and transparent mirror is appended to a LCD screen. This gives two noteworthy functionalities, ie. Imitating a typical mirror just as filling in as a presentation for ongoing information refreshes.

iii) Personalized information and data administrations:

Anybody utilizing this mirror will have the capacity to get continuous updates of news and features, date, time, climate refreshes just as different reports of our specific advantages.

Advantages:

There are many benefits of using a smart mirror. It makes life easier as the need to look at phones every time we need to check the date or weather is reduced. We have all the information that we need right in front of us. The future of Home Automation depends on Internet of things or IoT. Though the applications of IoT are diverse, the one that concerns the common man is how it can be used to make day to do life easier and faster.

CONCLUSION

We have designed an intelligent mirror remembering the up-coming future progression in the field of home computerization condition. The objectives of the keen mirror were to intend to decrease time required in a client's every day schedule and give a merger of client and innovation. The savvy reflect did the reasoning for the client with canny, usually utilized applications. Applications like their schedule, music, news, plan for the day, and climate will be accessible. The applications were subtly shown on the screen, covered up by the two-route reflect, as to resemble a consistent affair.

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