Smart Mirror Using Artificial Intelligence

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Abstract- *The world is moving fast and we are thinking to left some of the works to be done later due to inefficiency of time. Mostly everyone spents nearly 10-20 min infront of mirror. The time must not spend wastely. It must be usefull. Everyone of us touching forward to world where brilliant applicable and device saves time. In the expected system we current an interactive smart mirror with many appliances which related to every second of end users is utilized properly. It will act as particular electronic adjutant enables daily routines and main meeting from google accountant. It acts like 2 in 1 enables two mirror and calculates supported data jobs to end users. The smart mirror conviction is to unify machinery ideas in to peoples live by establishing it where everyones regular eventually strike .It also provides real time collaborate users.The smart mirror cpu is the raspberry pi 3 computer and the framework that retrieves the data from the web through the wi-fi connectivity*

The smart mirror aims to reduce and possibly eliminate the need for the user to make time in their daily morning or routine to check their pc ,tabletors, smart phones for information they need.There is a huge scope for this project and AI is much needed today.The smart mirror collects real world machine data and the data would be transmitted from the machine and would be managed by raspberry pi. These smart mirrors are not widely used due to cost or high requirements of hardware. The smart mirror is acted by raspberry pi 3 and connected by real world by internet. The updation of mirror will be taken from internet and applied by raspberry pi board. In this era of evolving technology the human life is becoming simpler and time efficient .Everyone has mirrors at their home so the idea about sharp mirror can be attractive and interacted.

Nowadays the datas are retrieved by mobile phones,laptops and computers. The people are trying to retrieve the data in an easily and quickly manner. The smart mirror are used in many platforms. This project was developed by Raspberry pi 3 version .It is the latest version. The scope of the mirror is retrieved from the internet and developed by raspberry pi board. The smart mirror holds raspberry pi, speakers, etc. The mirror will perform some of the activities like recognition.

I. INTRODUCTION

The gadget looks similar to normal mirror but it has a screen embedded in it.Magic mirror is a reflection device designed with cardboard frame, flat panel display system, raspberry pi 3 and program runs on internet .The unit of this method are simple and enables all to establish own modules.There are many recent technologies such as smart phone,pc, laptops,tablets etc. But it cannot be taken every places due to security problem.But we find answer to issue by used mirror in smart way. The smart mirror enables easy experience enables end users to walk up and to stay welcomed about details. By the hands on layout and communicate technologies.Many devices are established and end by multimedia intellect it provide secure, comfort and easy faciliates every places it can be home or industries makes lot of users to be comforted. It is used to reduce human effort.The advantages of smart mirror essence life clear as we hach to look at phones every seconds for checking the time, weather but it reduces the time to check.The smart things have important way for gathering and interchanging information .The expectation of mirror here smart mirror is one way mirror. LCD displays backward mirror and expose white UI elements with black background.While display on ,we can view both reflection and white elements although software to existing relevant information where we get ready for the day .The mirror have artificial intelligence and will able to interact with people at real time. The mirror able to afford solution and generate life of majority comfortable by connecting to huge information.

In the fragment few mileage mankind have high rise in smart products like perceptive tv , watching assistants like ALEXA and google home etc.This software is incorporated by mirror making it user friendly and provides more smart .

The world is changing frequently by iterative computing.The wireless connected equipments are used in our dailyroutines.Many are enlarged with the multimedia. We have lot of devices like smart mirror such as smart phones, smart cars, smart cities etc. smart homes will open the door

and windows by itself by viewing the weather and temperature outside. The smart mirrors implemented using the raspberry AI.

By using smart mirror can view date , time,etc. obviously we all look at the mirror daily to view how we are looking. The smart mirror is like the normal mirror which is interconnected smart devices with the intelligence which provides time, weather etc. The machine learning provides self learning which keeps mirror more responsive.

II. RELATED WORK

By adding high tech in miror many tasks can be done at a time. It is enclosed with many voltaic features such as GPS NAVIGATION , BLUETOOTH CONNECTIVITY, WIRELESS COMMUNICATION etc. The many improvement applicable are choice of musical tunes etc . It can be used in many fields like HOTELS, RETAIL STORES AND IN WORKPLACE ENVIRONMENT. The smart mirror defined innate interface that simplify approach to illustrate services. The eyesight is to progress and common interface consist of heterogenous computing devices connected with everyday objects. Environment admitt and behave to users actions.It has many automations like software, voice recognition,ai,machine learning,reasoning etc. Though the automation and function of exponent software are getting high ,work on field is increasing.Now the world is moving towards AI. Sometimes we have no time to read newspaper or switch on station in morning to check broadcast or weather.The project collects real world machine datas such as location based latest news and headlines.The two way mirror has lean studious coating which grant passage amount of light which reflects the rest.It is reflective from one side and glass transparent to other. The reflective side is ligher by shade with dark and transparent to reflection of light.

Smart mirror represent natural interface facilitates access to personalized services. The smart mirror is which collects different data. The environment collects different data. The environment uses different types of smart technologies like networking, voice recognition , AI , machine learning etc. Today smart home are trending among the people. Example: Amazon,Google are presenting the more technology in different areas as smart home. There are various kinds of smart mirror that is developed and used.

1. microsoft's magic mirror
   Developed in 2016.It works on the windows 10 IOT core on raspberry pi3. The mirror shows the traffic updates, weather, and voice recognition.
2. Apple mirror

The smart mirror prototype based on IOS IO which displays the iphone mirror. Mirror will slept after 45 seconds of ideal solution. It is a touch screen mirror.

3. Perseus smart mirror
   It runs in the raspberry pi. It does not require any application on smart phone. It is available in different sizes. It supports music,video etc

Magical mirror provides household appliances. The services offer interactive tv ,weather, informations, news, remainder etc.

Web services will be communicated with devices and provide services to the user which is not present in design of magical mirror

III. LITERATURE REVIEW

A) STATE OF ART: REVIEW

The main objective of this activity is that it is a advanced one type of smart device which people don't view it regularly and looks high amazing. It has simple API makes easy for builder to build apps.speech perception is duplicate as google services

B) FACE RECOGNITION:

By this technology the mirror can verify a person. It is the first component in security. It suits for network cam and effort goods with raspberry pi

C)VOICE ASSISTANT:

The software agents build tasks and services for original and enables concludes natural voice called as virtual assistant.

GOOGLE OR HOMINOID

It is a covering editor application builded by google for hominoid

SPEECH RECOGNITION

The API used in very cabable and accessible to use. It can perceive 120 language

The biographer considered that establishment of dig information. Technology will have wide ranging applications which will be benefited and useful.

IV. PROPOSED WORK

The smart mirror aims at displaying the information as well as providing customizable information. In the proposed system wall mounted single sided mirror used to capable of displaying important information as WEATHER REPORT,TIME, AND DATE. The special routine of events and climate reports can be obtained from google calendar API and weather api.The mirror will be thinking for user with the help of inbuilt personal assistant. The mirror provides the common information such as smart phones, tablets,weather etc. The use of personal assistants will keep things easy for use.

The project includes downloading the raspbian os based on dbein and extract the image on sd card by inserting card in raspberry PISD slot and achieve the following steps.The information will be relocation from machine and would be managed in central database.The cpu will take video and audio information from camera and microphone. The users will able to interact with the mirror in real time and search information on internet.The clapboadr frame will be prepared with led attached behind glass with all sensors and raspberry pi. The power supply attached to raspberry pi which will power led monitor and sensors. When person appears in front of mirror the sensor is activared and mirror will display welcome message to user.The audio information will give to microphone by voice command by user.The mirror will automatically sleep if person disappears from mirror with the help of sensors. The arrangement can be splitted in to 2 sections.

1. RASPBERRY PI
2. LED MONITOR

V. METHODOLOGY

The wooden frame will be LED added before the glass with all sensors and raspberry pi. The power supply is added to raspberry pi will rule led monitor and sensors. When mirror is actuate it will link and contains all api and operating system relevant to execute mirror. It requires internet which can be from wifi by raspberry pi. The basic layout will be made by html and css used to show mirror when it is on and will display weather , calendar , time etc. The docker contains api of alexa which respond to end users. The software can be programmed in java and python used for server – sided language.

The two way mirror and non-cyclic glass will show real time image. After actuation mirror will show weather time and news. The mirror would lie down automatically if person dissolve down by help of sensors. The mirror can synced with email for upgrading and remainders.

The project contains downloading raspbian os by debi and mining the image on sd card, insert the card in raspberry PISD slot

VI. CONCLUSION

The central advantage of this project was that it is a new kind of device that people not see every day and looks awesome.It has simple api that makes easy for developers to make apps.It is used to access information and time saving. Only the authenticate users can access it .So it reduces the fault.The life can made easy and enjoyable by more features on the mirror and tracking attire daily.The apps were unabtrusively displayed on the screen hidden by the two- way mirror as to look like a seamless experience. The future work on this project can be adding more widgets such as email,social media applications, traffic updates,speech processing etc. In future smart mirror can be made smarter by upgrading the AI. There is still a great scope to improve AI. Soon normal mirrors will be replaced by smart mirrors if they can be made affordable.

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