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IoT Based Smart Mirror

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ABSTRACT: Domain Io (Internet of Things) can be defined as the complex architecture of a global network with the power of self-preparation, based on common and interactive communication agreements where tangible and physical objects are owned, associated with users and the environment around them.

Web, IoT is focused on setting up, managing and connecting devices or something that is not normally related to the Web.

I. INTRODUCTION

The Internet of Things is a modern development in the application technology that connects to the Internet, advancing advances in the use of sensory networks, mobile applications, mobile communications, network communication and cloud technology. Investigators estimate that there will be a minimum of Internet-related items / items at least by 2020. So the big business and a lot of players in the industry are hoping for new opportunities for their assets. Assets include hardware modules and software for IoT controls, centers, or IoT control centers. IoT access is not limited to connecting to the Internet. IoT helps such devices to share and share data, which may include user-related information when making a program idea against a particular user or program purpose. Data itself is not important unless it is incorporated into content and converted into usable information. IoT network systems collect and generate information from low-level data using examples of such, sorting, categorizing, compiling and standardizing data. Thereafter, this information is collected by is designed and built to include information about the program and / or its users, its context, its functions and the progress towards its intended purpose, resulting in intelligent results. The use of Internet of Things (IoT) includes many different areas. such as cities, cities, climate, energy network, commerce, logistics, manufacturing, agriculture. This paper outlines how the common mirror used in our daily lives can be transformed into a SMART MIRROR with intelligent features introduced to the IoT world.

II. HARDWARE COMPONENTS

2.1. Raspberry Pi

The Raspberry Pi, promoted by the BBC in 1981, is a computer-size computer originally designed for education. Creator Eben Upton's goal was to develop a cost-effective device that would improve pre-university programming skills and hardware understanding. It was widely accepted by tinkerer, designers and computer enthusiasts for projects involving more than one microcontroller due to its compact size and affordable price.

2.2 Webcam

In this project the webcam will be used to identify the user's face and display the tweets. Every type of Webcam Raspberry Pi is compatible.

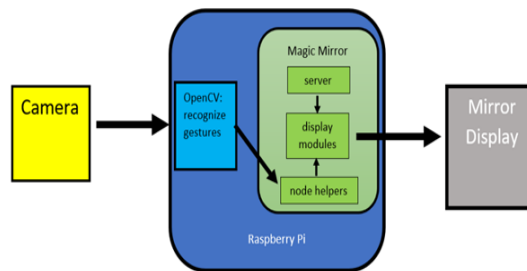
2.3 screen

This test uses a separate mirror known as a two-way mirror, or a reflection mirror. Compared to the middle family mirror the two-dimensional mirror is different. The two-way mirror, unlike the indoor mirror, is not painted on the back in an opaque color, but is left untouched. This allows the screen area to be visible on one side and be clear / overlapping on the other side. So the two-way mirror works like a mirror as long as the light from the back of the mirror can be sent.

III. FEATURES

1. Face recognition.
2. ALEXA.
3. Time
4. Weather Report
5. News
6. Calendar

IV. SYSTEM ARCHITECTURE



Our system consisted of a one-way mirror, placed on top of a monitor. Our monitor displayed 4 different levels each level consisted of different modules such as the time, weather forecast, and the newsfeed. We had a PiCamera mounted on the top of the monitor. We used OpenCV to recognize gestures, and these gestures controlled an aspect of the user interface. We additionally had push buttons connected to our Raspberry Pi which also controlled the user interface.

V. LITERATURE SURVEY

[1] Michael Teeuw was the first to create a smart mirror and first used the raspberry pi for this purpose. The first smart mirror blog was posted back in 2014, because it was a brand new product that got a lot of attention back then. This mirror is built on raspberry pi 2 and uses a monitor as a display. Display weather and time to import this from various modules connected to real-time websites. It was just an information panel that had no power to communicate with the mirror. A virtual reality-based scenario is created and displayed for weather, news, time or daily jokes *****. Ryan Nelwan [2] in 2016 collected a great deal of interest and developed a smart mirror very similar to the one built by teeuw's. A new feature added to this was a touch feature that was its first relative. It works great as a source of entertainment program where the user can use touch controls to perform various programs or control music, but without the artificial intelligence. Hannah Mittelstaedt [3] made a home mirror. Posted on reddit website. The screen used the smart phone as a display screen. As it was an Android tablet so android features were used to show time, weather, date, remains. Software uses android widgets but can be easily modified as it is open source. Anyone can modify and upgrade a new version. Home Mirror is a kind of smart mirror that is easier to build than other mirrors as it requires only two parts, any android mobile phone or tablet and mirror. However, even this lacked any kind of intelligence or communication.

VI. CONCLUSION

A smart screen that works as a smart home management platform is a future-based application that provides users with an easy-to-use visual interface, allowing users to access custom-made services in a highly interactive way, while performing other tasks simultaneously. The great power that this is is a new kind of smart device that people don't see every day and it looks so amazing. The screen works both as a standard mirror and a mirror that displays daily notifications to an authorized user.

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