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Smart Mirror Using IoT

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ABSTRACT: The Domain IOT (Internet of things can be described as a complex global network architecture with self-configuring capability, based on normal and interoperable communication protocols in which physical and virtual objects have identities. The Physical attributes and virtual personalities make use of intelligent interfaces, and are seamlessly incorporated into the knowledge network, often communicating data associated with users and their surrounding. Although other existing devices, such as networked computers or 4G-enabled cell phones, also have a form of specific identification and are often linked to the Web, IOT focuses on configuring, managing and networking devices or object that usually are not correlated through the Web.

I. INTRODUCTION

The Internet of Things is a modern development in application technology connecting to the Internet, pushing advancements in applications of sensor networks, hand-held apps, cellular connectivity, networking and cloud technologies. Researchers

estimate there will be a minimum of 50 billion Internet-connected devices / things by 2020.Hence the largest business and the bulk of players in the sector are also optimistic about the possibility of new opportunities for their goods. The goods include hardware and software modules for IOT endpoints, centers, or IOT universe control centers. IOT's Reach is not restricted to merely linking items to the Internet. IOT helps such devices to interact and share data knowledge, which may involve user-related details when performing program sense against a specific user or system purpose. Data itself has no significance unless it is contextualized and converted into usable knowledge. IOT network systems collect and generate knowledge from data at a lower level through sampling, sorting, categorizing,condensing and contextualizing the data. Subsequently, this information gathered is

arranged and designed to infer knowledge about the application and/or its users, its context, its functions and progress towards its targets, making for a smarter results.The implementations of the Internet of Things (IOT) cover a broad variety of realms

like households, towns, climate, energy network, commerce, logistics, manufacturing, agriculture, safety etc. This paper presents an outline of how a standard mirror used in our everyday lives can be adapted to a SMART MIRROR with intelligent features introduced to the world of IOT.

II. COMPONENTS

2.1.1. Raspberry Pi

A Raspberry Pi, inspired by the 1981 BBC Micro, is a credit card sized computer originally designed for education. The aim of Creator Eben Upton was to create a low-cost device that would improve pre-university level programming skills and understanding of hardware. It was widely embraced by tinkerers, designers and computer enthusiasts for projects involving more than a single microcontroller because of its compact size and affordable price.

2.1.2 Webcam

In this project a webcam would be used to identify the face of the user and show tweets. Every form of Webcam is Raspberry Pi compatible.

2.1.3 Mirror

This experiment utilizes a different mirror known as a two-way mirror, or reflection mirror.Compared to an average household mirror a two mirror is unique. The two way mirror,unlike a household mirror, is not painted on the back with an opaque color, but it's left untouched. This gives the mirror property to be reflective on the one hand and transparent / translucent on the other. The two way mirror therefore acts as a mirror as long as there is no sending of light from the mirror's back.

III. FEATURE

1. Face Recognisation.
2. ALEXA.
3. Time
 4. Weather Report
5. News
6. Calender

IV. LITERATURE SURVEY

Michael Teeuw's [1] was the first to build a smart mirror and first to use a raspberry pi for this purpose. The first smart mirror blog was posted back in 2014, since it was a very new product it gained a lot of attention back then. This mirror is built on raspberry pi 2 and uses monitor as the display. It displayed weather and time importing these from various modules which were linked to real time websites. It was just an information panel which didn't have the capability to interact with the mirror. A module-based interface was created and displayed weather, news, time or daily comic strip. Ryan Nelwan [2] in the year 2016 gathered much interest and developed a smart mirror much similar to the one developed by teeuw's. A new feature added to this was the touch feature which was a first of its kind. It serves mostly as a source of a entertainment system in which a user can use the touch controls to run different programs or control music, but did not have artificial intelligence. Hannah Mittelstaedt [3] made a home mirror. It was posted on reddit website. The mirror used a smart phone as the display screen. Since it was an android tablet so features of android were used to display time, weather, date, remainders. The software made use of android widgets but can be modified easily as it is open source. Anyone can modify it and develop a new version. Home Mirror is a kind of smart mirror that is easier to build than other mirrors as it requires just two main components, any android mobile phone or a tablet and a mirror. However, this too lacked any kind of intelligence or interaction.

V. CONCLUSION

The smart mirror which acts as a smart home control platform is a futuristic system that provides users with an easy-to-use mirror interface, allowing users access to customizable services in a highly interactive manner, while performing other tasks simultaneously. The main strengths are that this is a new kind of smart device that people don't see every day and it looks very spectacular. The mirror works both as a normal mirror as well as a mirror showing daily notifications to the authorized user

REFERENCES

1. Raspberry Pi. (2019). Magic Mirror - Raspberry Pi. [online] Available at: Micheal Teaw's official website. [Accessed 17 Jan. 2019]. 2. GitHub. (2019). MichMich/MagicMirror. Available at: Mirror Forums [Accessed 17 Jan. 2019].
3. Smart-mirror.io. (2019). Smart Mirror by evancohen. [online] Available at: http://smart-mirror.io/ [Accessed 17 Jan. 2019].
4. Medium. (2019). My Bathroom Mirror Is Smarter Than Yours – Max Braun – Medium. [online] Available at: https://medium.com/@maxbraun/my-bathroom-mirror-is -smarter-than-yours-94b21c6671ba#.q4932hjfc [Accessed 17 Jan. 2019].
5. howchoo. (2019). Build a voice-controlled DIY Raspberry Pi smart mirror with Jasper. [online] [Accessed 17 Jan. 2019].

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