

# Smart Mirror System using Raspberry Pi

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## ABSTRACT

Smart glasses play an important role in future technology by offering users mirror functionality and the intelligence that comes with it. Everything has become smarter now, so introducing smart glasses can reduce the time and energy consumed. The image can be seen more clearly through the glass on both sides. All information of the smart mirror is a date, time, temperature, weather, and list using a Raspberry Pi 3 board. Smart glasses represent the combination of traditional and modern technology, reaching a wide range of applications. This study uses Raspberry Pi as the basis for interviews and in-depth analysis of smart glasses. Raspberry Pi is a low-cost. This first article discusses the evolution of smart glasses and traces their history from concept to technology. In addition, the main points and functions of smart glasses are mentioned, and the central function of Raspberry Pi is emphasized. This research explores a variety of uses for smart glasses, from simple weather and date information to more advanced features such as personal information, security detection and house rules. All applications are considered valid and functional when connected to the Raspberry Pi. This study examines the software and technology commonly used in smart glasses for a better understanding of the field. We explore a variety of open source and commercial software options, as well as programming languages and techniques, to create interactive and dynamic smart glass interfaces.

Keywords: Smart Mirror, Information Technology, Raspberry Pi 3.

## I. INTRODUCTION

Nowadays we see the people are linked and use data information with complete knowledge. Where the

advanced techniques are used where to upgrade a things in nowadays life styles.

To build the smart mirror we required two glasses, monitoring screen, sides to hold the glass and browse with Raspberry Pi and python language is require to execute.

We can use the smart mirror in Home, shopping malls, Offices. Where the smart mirror is very sensitively towards the person.

The author anticipates that the interactive mirror will effectively address the challenges encountered by individuals in their day-to-day activities by furnishing information in an unobtrusive manner.<sup>[3]</sup> The Interactive Mirror enables individuals to reduce their reliance on other devices, and it encompasses all the functionalities of a smartphone, including the provision of calendar, email, weather updates, and the ability to play audio and video content. This marks a pivotal moment where individuals can maintain an upright posture and have their hands unencumbered.

On a daily basis, individuals often engage in the act of examining their attire and appearance through the use of a mirror. This interaction with the mirror holds a psychological significance. Consequently, the concept of a mirror capable of responding to one's commands has the potential to generate excitement among individuals. This transformation of a conventional mirror into an insolent mirror serves as an information system, facilitating the collection of data.

## II. METHODOLOGY

A smart mirror is a device that displays the information the user needs, just like a regular mirror.<sup>[10]</sup> We use LED displays as the interface between the user and the mirror. The display connects to the Raspberry Pi-3 and is then accessed via Wi-Fi to store the information the user needs. The information to be displayed is preset by the user. LED screens are used to display the information that users need. Here time and date, weather updates, calendar, alerts and news updates are displayed in the mirror

## III. Implementation & Block Diagram

We plan to design and develop a kind of futuristic<sup>[10]</sup> smart mirror that provides a whole new experience to the user with the flavor of AMIL Our proposed smart mirror consists of a two-way mirror, acrylic glass, monitor (LED), Raspberry Pi, Raspberry Modules, and sensors A wooden frame will be prepared with LED attached behind the glass with all the sensors and the raspberry pi. The power supply is attached to the raspberry pi which will power the LED monitor and the sensors. Once the mirror is activated, it will connect to the docker which contains all apps and software needed to run the mirror.

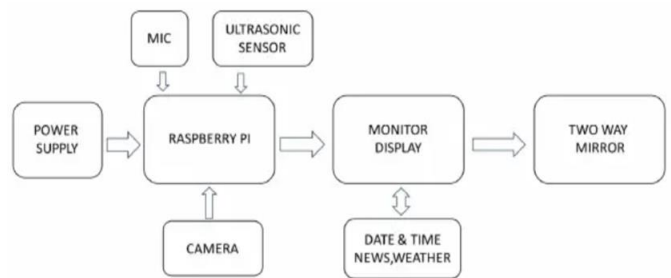


Fig 1. Smart Mirror System using Raspberry Pi

## IV. CONCLUSION

We had proposed the comparative study and a design of a futuristic smart mirror which could be a great device for ambient home services Speech recognition is one of the major advantages of the mirror. Live animations will make the bathroom more fashionable. The proposed smart can be easily extended for some other frameworks like making phone calls. In future this mirror can be used to build smart home networks with devices such as lights, virtual assistant, TV, music system, refrigerators, etc. can be integrated together. This would lead to a smart home.

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