

A Survey on Smart Mirror

Yashoda Ghag¹, Diksha Upadhyay², Sharvil Gadkari³, Shubham Pandit⁴, Dr. Sunil Rathod⁵

^{1,2,3,4}Student, Department of Computer Engineering, Dr. D. Y. Patil School of Engineering, Lohegoan Savitribai Phule Pune University, Pune, Maharashtra, India

⁵Professor, Department of Computer Engineering, Dr. D. Y. Patil School of Engineering, Lohegoan Savitribai Phule Pune University, Pune, Maharashtra, India

ABSTRACT

A smart mirror is a system that functions as mirror with additional capability of displaying date, time, current temperature, weather details. To design a smart mirror that receives a online news and display it using Internet of things (IoT) circuitry and to detect thief when nobody is in home. The smart mirror will consist Raspberry Pi, LED monitor, speakers, camera, microphone with two-way mirror and acrylic glass. With the help of voice recognition API, the mirror will communicate with the user through voice commands and responds them accordingly. The mirror could also support human movements. The mirror will highlight some basic amenities like time, local news, weather.

Keywords : Raspberry Pi 3+, Pi Camera, Smart Mirror, Voice assistance.

I. INTRODUCTION

Smart mirrors, such as Magic Mirror and Home Mirror have recently started to be developed by people in the Maker community, with varying degrees of interactivity. However, so far, the features of these mirrors have been limited. The short answer is not quite yet. There are a lot of concepts and prototypes being built but so far there's not a lot out there for the everyday consumer. Effective time management is an essential factor in increasing the production of day-today life. Integration of technology into people's daily live has made that time management possible. However, though successful technological products have been used to increase productivity, the use of technology has become another task in everyone's daily to-do list. Technology should mould to our schedule, not the other way around. That is where the "Smart" mirror idea originated. The Internet of Things with its enormous growth widens its applications to

the living environment of the people by changing a home to smart home. Smart home is a connected home that connects all type of digital devices to communicate each other through the internet

II. LITERATURE SURVEY

In 2003, Phillip unveiled their Mirror TV that was built using the same principles that of smart mirrors. Their product was a normal TV that was put behind a two-way mirror so that the TV would appear as a mirror when turned on and as TV when turned on. They also had a option to have the mirror be larger than the TV. A usage example presented by Phillips was to have the children watch cartoons while brushing their teeth at the same time. This mirror is more in line with the smart mirror we've come to know today. The purpose of this paper is to investigate potential use of smart mirror in home environment and to facilitate the user's everyday life. The Smart mirror takes voice commands as input to give response and Sonus is a speech to text library that can quickly and easily add VUI (Voice User Interface) to any hardware or software [3]. The overall finding of the above discussion is given below as Table-1

Table-1

Sr.	Paper Name	Author	Method Proposed	Limitations
No.				
1.	A Comparative Study and	Mittal, V.	Voice Assistance	Energy Consumption
	New Model for Smart	Verma, R.		No Authentication.
	Mirror	Rastogi		
2.	Smart Mirror Integrated	Prof. Sheetal	Sending Notifications	Internet Connection
	with Smart Assistant	Patil,	via Email	Database to store photos
		Prathamesh	Net Streaming	
		More, Ritali		
		Rajput.		
3.	Smart Mirror using Virtual	Amit Dhavle,	Music Player	Security
	Voice Assistant	Saurabh	Pocket Friendly	Power Supply
		Chavan,		
		Mayuresh		
		Supe.		
4.	Design of Smart Mirror	S. L. Herman	Big Data	Security Issues
	Based on Raspberry Pi	and C. G.		
		Garrard		
5.	Smart Mirror for	A. Korkin and	Home Automation	Not Reliable Data
	ambient home	F. Rosei	System	Transfer
	environment			

III. TAXONOMY CHART

	LIVE STREAMIN G	ALERT GENERAT ION	NET CONNECTION REQUIRED	MUSIC PLAYER	SECURITY CONSIDERATI ON
SMART MIRROR	NO	NO	YES	YES	NO
SMART MIRROR WITH ASSISTANCE	NO	NO	YES	YES	YES
SMART MIRROR VIRTUAL ASSISTANCE	YES	YES	YES	YES	NO

IV.CONCLUSION

The goals of the smart mirror were to aim to reduce time needed in a user's daily routine and provide a merger of user and technology that becomes an enhancement, not a new burden. Apps like calendar, music, news, to-do lists and weather will be available. The user doesn't even have to worry about turning on and off the system because the mirror will detect motion and do the work for them. This will help us reduce power consumption.

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