

# DESIGN AND FABRICATION OF SMART MIRROR

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**Abstract** - In this quick running world wherever time has become the main constraint, each and every minute becomes necessary to the busy people. Hence, good mirror may well be a new advantage for the busy people. UN agency believe multi-tasking and feel a requirement to urge the daily updates whereas on the hustle rather than repeatedly checking the devices for the knowledge, one may well be conversant whereas grooming oneself. This project may be accustomed show numerous data like weather, time, date, calendar, news updates, music, and email notification within the sort of widgets. Embedding a monitor in mirror seems terribly art movement. The arduino at the backend controls and manages the info displayed on mirror; one will read numerous notifications from date, time and news to weather, outlook and a lot of things.

**Key Words:** Arduino Mega, GPS Module, Smart Mirror, Temperature Sensor.

## 1. INTRODUCTION

The growth in Science and also the scientific innovations during this field have contributed greatly towards the expansion within the technology, one in all that, square measure good devices. With the advancements in technology increasing, armament these good devices within the homes shows the rise in interest shown by folks. The utilization of good devices, redefines the expertise of living throughout the globe that is of nice facilitate to find economical solutions of day to day issues. The demand and industrial accessibility of good devices have enhanced recently. Our way has evolved in such some way that optimizing time is that the most vital factor. Our work relies on the thought that we tend to all explore the mirror once we withdraw, therefore why the mirror become good wouldn't.

A standard approach for building a wise mirror is to use a prime quality unidirectional glass, a digital display monitor, a frame to carry the glass and monitor, and an online browser with python to supply the software package options and drive the show. In this world everybody desires a comfort life. Homo sapiens have unreal completely different technology for his purpose. So this project has been developed with the thought of creating home good to save lots of time. The

device that has been researched and designed is named "Smart Mirror". It's a wall mounted mirror that displays relevant things to the user like weather, time, date, temperature, humidness and alternative fields of interest.

## 2. LITERATURE REVIEW

In 2003 Phillips 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 an 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. [4]

Later in 2005 Phillips announced their research project My Heart that built upon the idea of an informative mirror. While their original Mirror TV was simply a TV that also functioned as a mirror, the My Heart project would integrate a display to showcase various medical statistics. However this project required on body electronics to collect and analyses the data. The mirror itself simply served as an informative display. [4]

In 2016 Microsoft released detail on the smart mirror they have been working on. Their intention does not seem to be to create a commercial smart mirror to sell to consumers, but rather they unveiled all the details on how to build one and made all the code publicly available at a github repository. Rather than selling a nished product consumers have the option to assemble their own mirror as a do-it-yourself project. [4]

### 3. OBJECTIVES

“Time is what we want most, but, what we use worst.”  
– William Penn.

- Time management is a crucial facet of our life. Multitasking at the side of technology helps us to take care of associate degree economical schedule.
- Recent advancements in technology have paved thanks to modifying things around us. Sensible phones, tablets, Personal Computers offer us, up-to-date info with relevant current news, social media, and private appointments. However, still, all of the squares measure a way of distraction as they interrupt one's routine. They cannot be carried everywhere as there's a risk of harm.
- Our answer to the matter is to show the mirror sensible. Typically the only real purpose of the mirror is for private grooming / loving oneself, decoration, and design. This odd time will be managed expeditiously. Sensible Mirror is embedded with numerous electronic options.
- Smart Mirror as a private assistant plays a crucial role for folks with tight schedule providing fast, updates of current trending news, day-after-day appointments further as time, and weather reports of the day.

### 4. METHODOLOGY

- Smart Mirror as a Mirror:

We can see our take for we are able to see it in an exceedingly natural mirror whereas trying and grooming with the assistance of mirror with high concentration of metallic element content.

- Smart Mirror as an Information System:

Time, Date, weather details, Latitudes and Longitudes with GPS are fetched.

### 5. COMPONENTS

- Arduino Mega
- TFT 3.5 (Colored)
- Temperature Sensor – LM 35
- GPS Module
- Two way Mirror Glass
- Battery

- Box

### 6. CONNECTION DIAGRAM

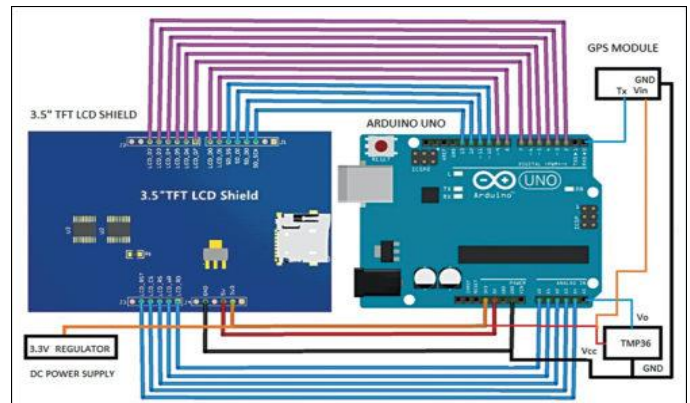


Figure 1 - Connection Diagram

### 7. ADVANTAGES & FUTURE WORK

This project presents a smart mirror system that has integrated several impressive features. A reliable and easy to use design is implemented.

Smart mirror area unit celebrated for its best user expertise to fetch info associate degree to possess an interactive speech communication with the mirror alongside self-grooming. They not solely area unit celebrated for exchange of knowledge however can also be integrated to an even bigger system providing users higher expertise which has news change, home security, home automation, intrusion detection, medical usage and far additional.

As for future work, the system may be extended as industrial product. Exploitation the unreal Intelligence this will be accustomed management Home Appliances and lighting. For the safety purpose Face detection may be used.

## 8. SAMPLE PICTURES



Figure 2 – Sample Picture 1



Figure 3 – Sample Picture 2

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