**Magic Mirror**

**GitHub code: https://github.com/Umanggrg/hello-world.git**

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# Project summary

This mirror tells you the weather of the city, time, and date. Using a GUI and program to project them onto the reflective mirror. This is just a convenient way for users to start their day and plan their day accordingly: what time it is, in case they are in a rush, the weather to know how they will dress, and the date in case they have an appointment or a deadline due. People could use their phones for this kind of information, but the smart mirror helps people to know such information in a convenient way by just looking at the mirror, and not getting distracted by something else.

# Goals and objectives

Our main goals and objectives were to successfully use the raspberry pi to collect and display the city weather condition for the day, as well as the time and day. Also, to be able to have an interactive GUI that allows the user to interact with the screen to find different information the mirror has to offer, like swapping time formats as well as checking the weather condition in another city.

# GPIO goals

Our GPIO goals were to turn on the GUI once a person comes close to it by using a sensor and our board, if there is no one it will only display the time and day.

# GUI goals

The GUI we have is able to correctly present three different type of information which includes weather, time, and date, as well as being interactive. Meaning the user has the ability to press different components on the GUI and/or GPIO to get different formats about the information on the screen.

We were pable to use the GUI in the mirror where the user can see the details of the weather with an image, as well as a digital clock. We used our raspberry pi as the screen of our mirror.

# Timeline

Chart

Description automatically generated with medium confidence

# Future Development Plans

With more money and time, we would add more features to make it user friendly, like a google calendar and such. We would make the mirror a touch screen, have a screen that completely covers the back of the mirror, a better sensor and frame, and update our program so that you don’t need to recalibrate the sensor each time you want to use it, or at least that it does it automatically and we don’t have to type it in.

# Lessons Learned

Besides all the new things we learned regarding the coding, during this project we learned that if you think you can do it then you will be able to do it, we struggled a lot in the codes but eventually we got through everything. We shouldn’t give up just because it is too hard in the moment because you will always find a way through. Rather than googling everything around, try creating and understanding the logic first, that way you can get through the problem. It is extremely satisfying when you get the end result and seeing the progression since the beginning especially because of all the time and hard work we put into it.