

Project Backlog - Magic Mirror

Team 25

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Problem Statement:

There is a demonstrated need for an easy to consume information hub within the home. A magic mirror (a device that acts both as a mirror and a display) is the perfect solution to provide information at a glance while users prepare for their day. Our product will be unique in that it will combine the 3D gesture capabilities of the Leap Motion with an interactive display. Previous products relied on static displays (no user input) or rudimentary touch.

Background Information:

Thanks to advancements in material science and computer engineering, the ability to create a mirror with a display and wireless interactivity is now feasible. There have been numerous attempts at creating a mirror with a display that shows static information, but there has not been any attempt at a successful retail product that includes the ability to easily and intuitively interact with the display wirelessly (without touch display).

The Magic mirrors that are out there are more of a "Do it yourself" type projects with step by step instructions. We plan to implement similar designs, but we plan to take it further with a user responsive design. With gesture control and voice recognition, the mirror will be responsive to the user's actions and change accordingly.

The current limitations of other displays are:

1. Lack of user interaction
 - a. Solution: Voice recognition and gesture control
2. Mostly text based
 - a. Solution: Implementation of graphics and media
3. Static Display
 - a. Solution: Dynamic content

The target audience for this solution is both the single and family electronics consumer market.

Functional Requirements:

As a user:

- I would like to see myself in the mirror.
- I would like the mirror to provide encouraging statements.
- I would like the mirror to turn on when the I'm in front of it.
- I would like to see today's weather.
- I would like to see the time.
- I would like to log in to my personal account.
- I would like to view my calendar.
- I would like to have voice response (if time allows).
- I would like to get alerts on appointments.
- I would like to get notification if I have received emails.

- I would like to take pictures.
- I would like to post pictures to social media.
- I would like to see my emails
- I would like to answer video calls.
- I would like to see the weather forecast.
- I would like to see interesting 'screen saver' like animations.
- I would like to listen to music.
- I would like to watch Netflix.
- I would like to control my music.
- I would like to play basic games.
- I would like to browse the internet
- I would like to see my picture albums
- I would like to play music
- I would like to watch internet streams

Non-functional Requirements:

As a developer:

- I would like the mirror to be fast and responsive.
- I would like the device to remain cool under load.
- I would like to be able to access the internal hardware easily.
- I would like to know if any software failed

As a user:

- I would like the device to be portable
- I would like a simple and easy setup
- I would like the device to look nice and in place