

# Project Smart Look

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**CREATING THE NEXT®**

# Project Members

CompE



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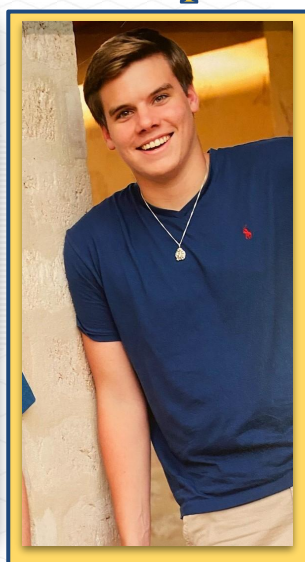
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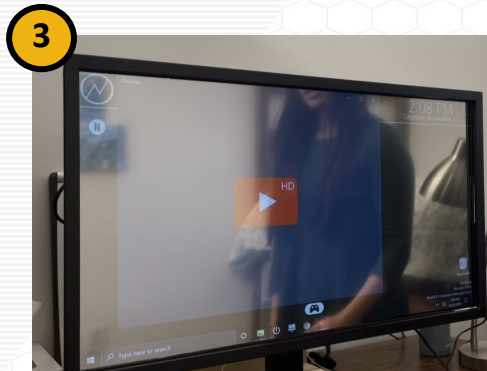
# Our Solution

## 4-in-1 Functionality

1. Normal mirror
2. Smart capabilities (weather, calendar, take notes)
3. Home entertainment (cast videos)
4. Decoration (display image for decoration)

## Features

- IR frame to enable touch capabilities
- User layout customization
- Integration with Raspberry Pi
- AI Cortana Voice recognition



# Design Specifications

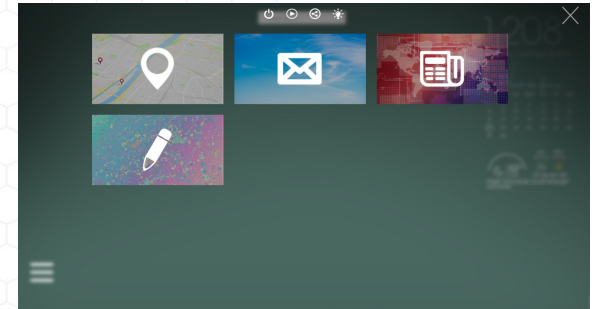
|                       |                               | Engineering Requirements |                |                  |       |                     |               |
|-----------------------|-------------------------------|--------------------------|----------------|------------------|-------|---------------------|---------------|
| Customer Requirements |                               | Component Price          | Size of Mirror | Storage Capacity | Power | Thermal Maintenance | Functionality |
| Customer Requirements | User Interface                | -                        | +              | +                | -     | +                   | +             |
|                       | Touch Screen                  | +                        | +              |                  | -     | +                   | +             |
|                       | Voice Control                 |                          |                |                  | -     | +                   | +             |
|                       | Software Applications         |                          |                | -                | -     | +                   | +             |
|                       | WiFi / Bluetooth Connectivity | +                        |                |                  | +     | -                   | +             |
|                       | Aesthetic                     | +                        |                |                  |       |                     | -             |
|                       | Ease of Assembly              |                          | -              |                  |       |                     | -             |
|                       | Cost                          | +                        | +              | +                | +     | +                   | +             |

# Software

## Smart Look Demo Skins



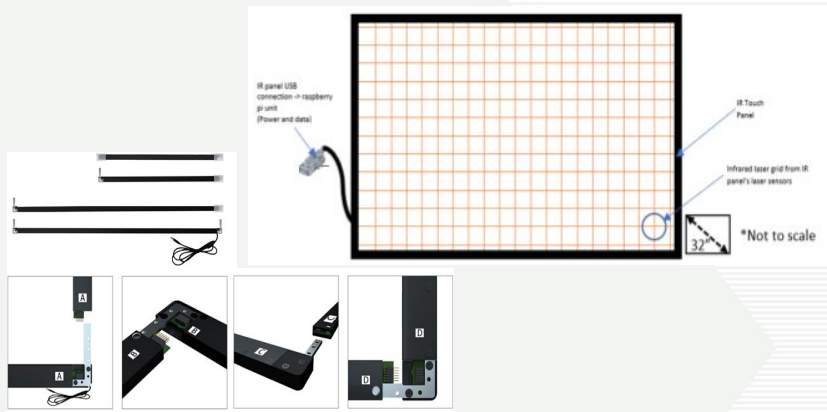
 **Rainmeter**  
desktop customization tool



- Windows on Raspberry Pi
- Rainmeter
  - o Desktop customization tool
- Time and common applications
- Organized applications
  - o Entertainment
  - o Media
  - o Productivity
- Customizable and groupable
- Add more applications

Sample user Rainmeter templates <https://www.deviantart.com/rainmeter>  
<https://www.reddit.com/r/Rainmeter/>

# Hardware

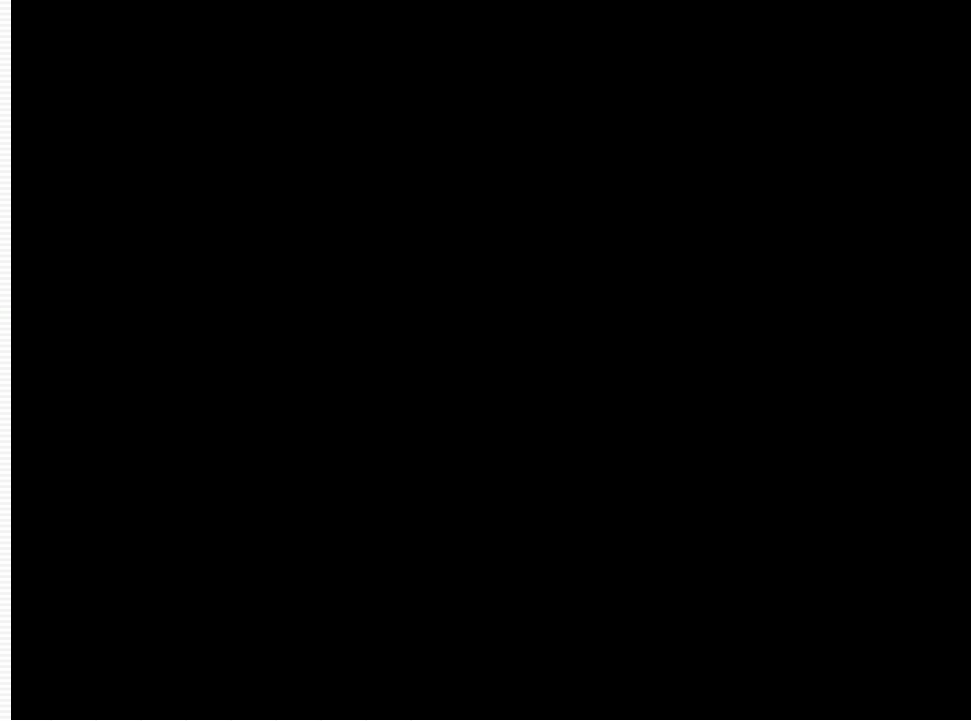
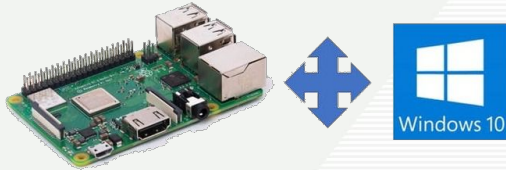


# Integration

## Demo

### Challenges

- Windows on Raspberry Pi
  - o Unofficial Windows OS
  - o Few drivers not compatible
- Rainmeter
  - o First skin created was very slow on the smart mirror
  - o Second skin was more compact and worked well



# Future Work

## Current prototype issues

- Nonfunctional drivers - fixable via USB-driver adapter
  - Audio
  - Bluetooth
  - WiFi
- Noticeably slow but acceptable response
- Some Touch gestures still unperfected
  - Touch scrolling



## Potential Solutions

Rock Pi X - released November 2020

- Windows OS compatible unit
- Intel Atom x86 processor
- Enables more functionality
  - Not limited by WoR
  - Functional peripherals on boot
  - Greater performance
  - Fluid response

