

# **DOs & DONTs OF AR**

# Hello

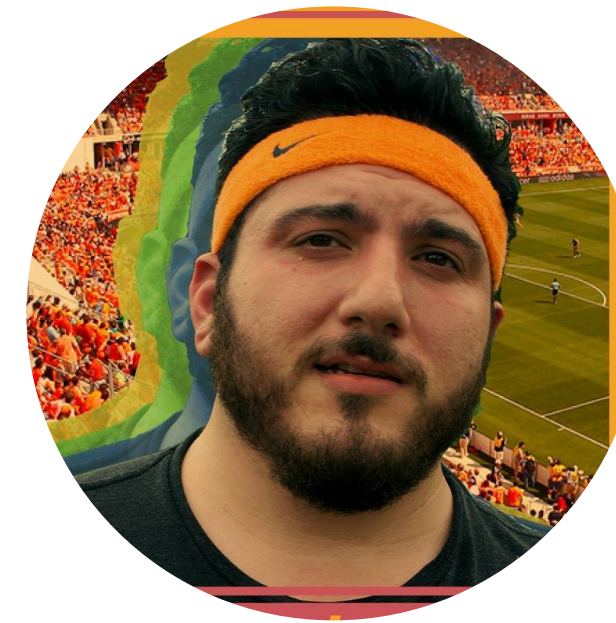


## Evelina Tapia, PhD

LEAD USER RESEARCHER

As a Lead User Researcher, Evelina uses her expertise in cognitive neuroscience and psychology to help Fortune 500 companies achieve their business objectives by improving the user experience of their tools.

@MYNAMEISEVELINA



## Osama Ashawa

DESIGN PRINCIPAL

His work at ChaiOne has been spent questioning, deconstructing, and crafting successful research-driven designs for users inhabiting diverse environments.

@LMAOSAMA



# THREE REALITIES

**AUGMENTED  
REALITY**

**MIXED  
REALITY**

**VIRTUAL  
REALITY**

AR

MR

VR



THREE REALITIES

# AUGMENTED REALITY

Augmented reality (AR) is a live direct or indirect view of a physical, real-world environment whose elements are augmented (or supplemented) by computer-generated sensory input such as sound, video, graphics or GPS data.



## THREE REALITIES

# MIXED REALITY

Mixed reality (MR), sometimes referred to as hybrid reality, is the merging of real and virtual worlds to produce new environments and visualizations where physical and digital objects co-exist and interact in real time.





THREE REALITIES

# VIRTUAL REALITY

The computer-generated simulation of a three-dimensional image or environment that can be interacted with in a seemingly real or physical way by a person using special electronic equipment, such as a helmet with a screen inside or gloves fitted with sensors.





# AUGMENTED REALITY

## **AUGMENTED REALITY**

AR can be experienced on multiple platforms.

**AR**



## **Mobile Devices**

People experience AR most commonly on smart phones and tablets.

## **Smart Glasses**

A hands-free option for experiencing AR, great for industrial and manufacturing use cases.



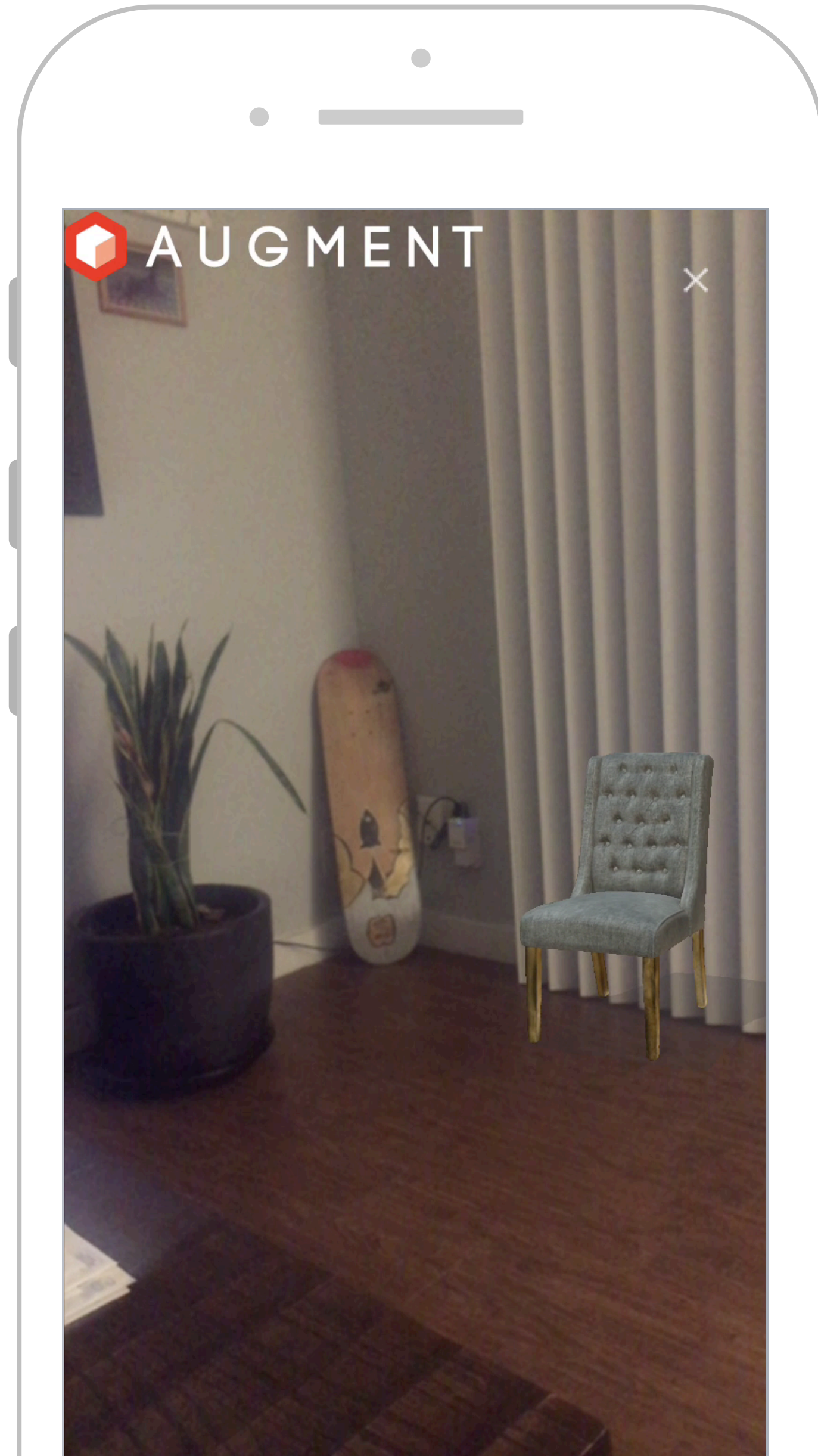
## **Cardboard/Headset**

More of an immersive experience, Headsets that utilize a smart phone have increased in popularity most notably with Google's Cardboard.

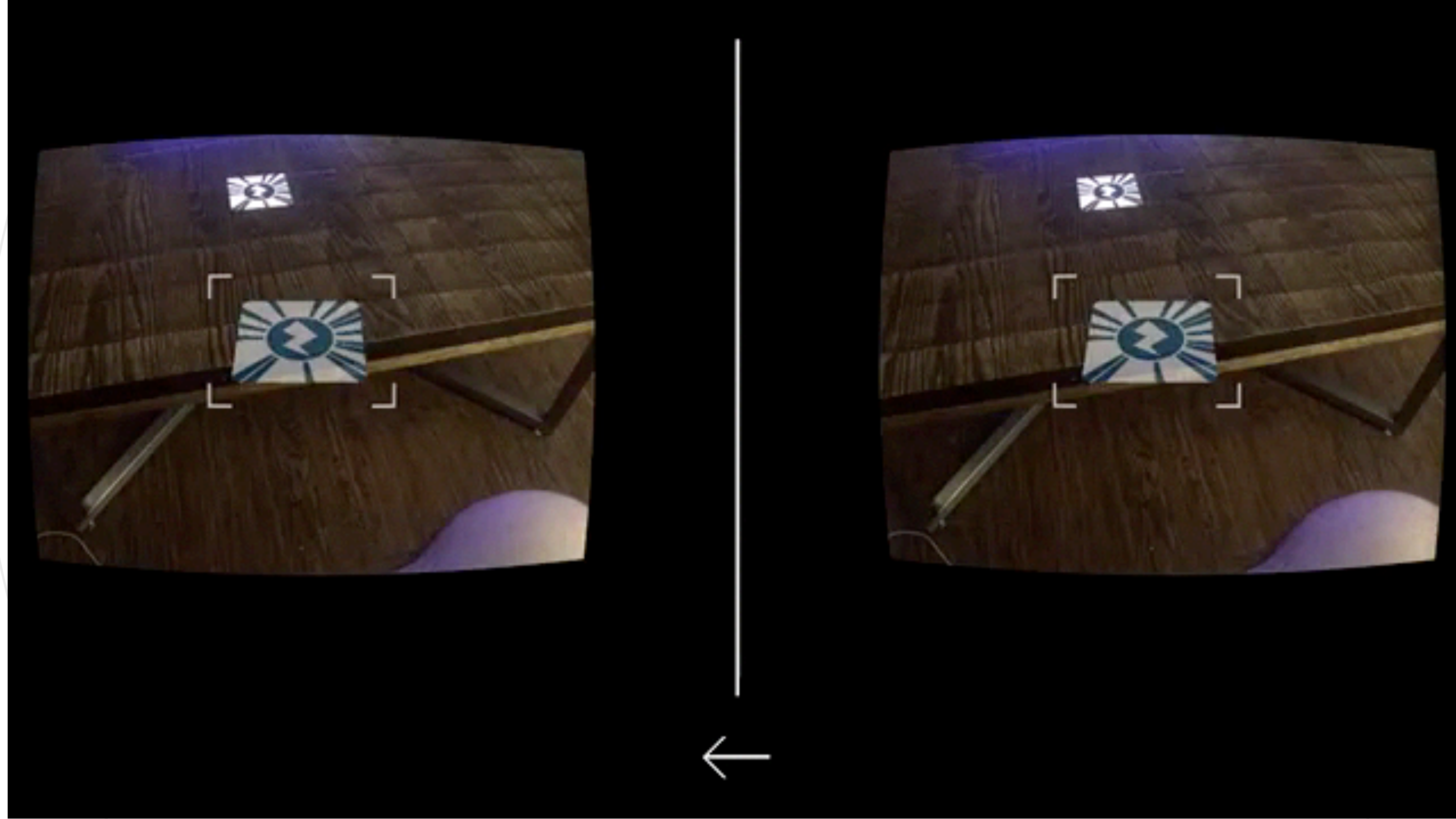




EXAMPLE OF MOBILE

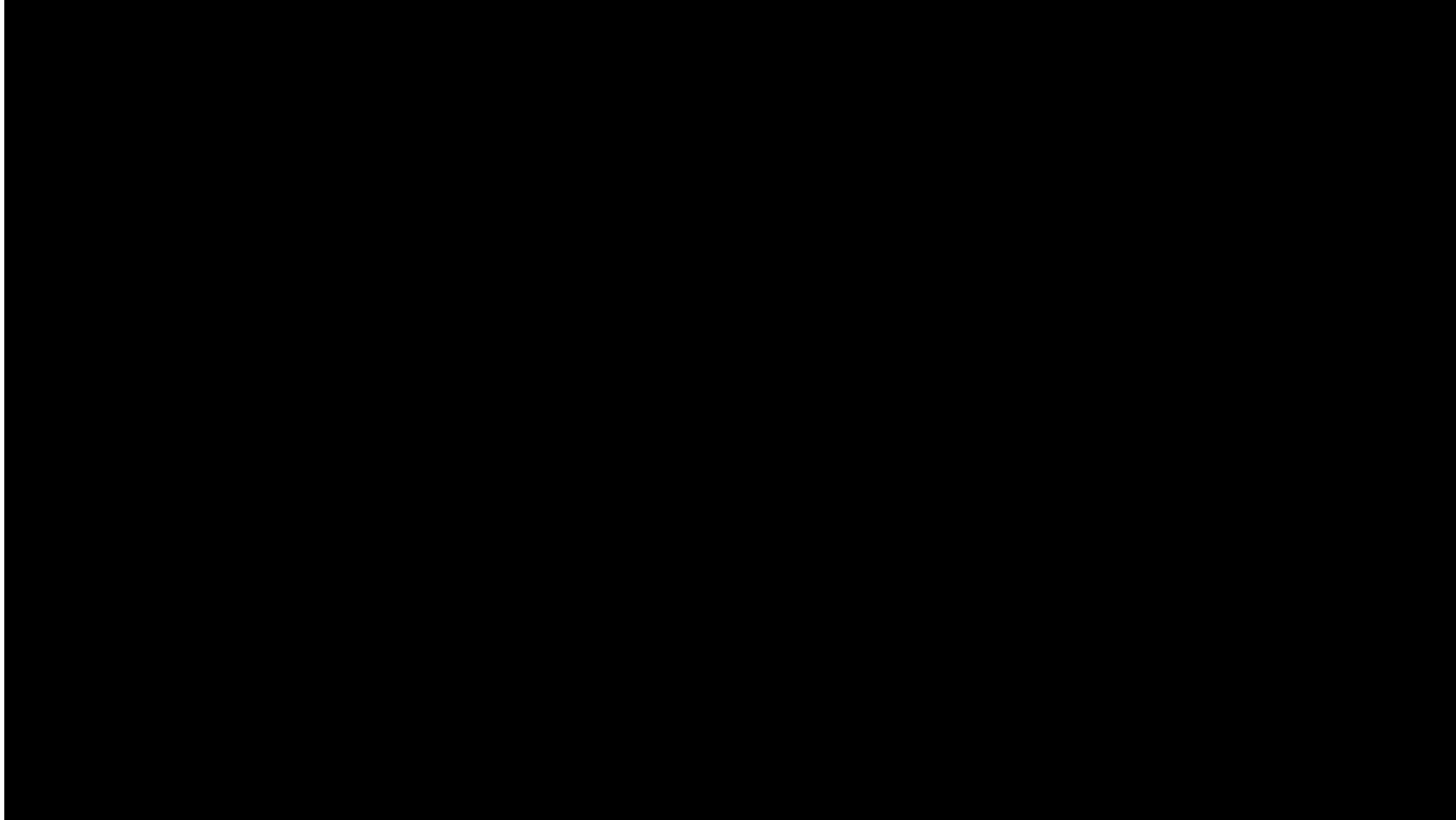


EXAMPLE OF MOBILE + CARDBOARD





EXAMPLE OF SMART GLASSES





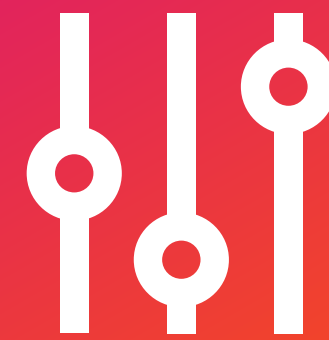
**MOBILE  
AR**



# WE WILL COVER



DIGITAL OBJECTS



INTERFACE DESIGN



INTERACTION DESIGN



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# DIGITAL OBJECTS

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## Appearance

Digital objects should aim to appear 3-dimensional rather than flat.



## Animations

Utilize minor animations because...



## Touch don't look

Reward users with interaction – watching an animation loop is boring, engage the user.



## Clarity

Clearly distinguish between interactive and non-interactive elements of your digital object.

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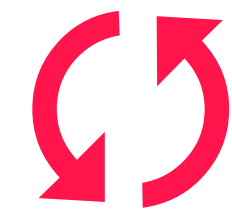
# INTERFACE DESIGN

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## Visual Hierarchy

2D foreground of app UI feels interactive (e.g as in Augment app); use opacity to create a sense of foreground and separate 3D and 2D menu regions



## Reuse Mobile Patterns

Use some of the mobile UI elements - don't have to invent a whole new language.



## Highlighting Interactivity


Use animation, highlighting, graphic states, and even vibration to indicate interactive elements within view. Visual cues elicit discovery.

## Space & Type

Clearly distinguish between interactive and non-interactive elements of your digital object.

Designing things for low resolution - text needs to be easy to read until hardware catches up





# INTERACTION DESIGN



## Touch-Free

Directional interactions like “look and wait” for making choices as well as head gestures like nodding, will be necessary.



## Touch

Follow established interaction patterns and guidelines for touch controls. Give attention with foreground UI and their legibility against the live scene.



## Feedback

Visual and haptic feedback, established by mobile UI patterns, reassure interactivity to users.



TO SUM UP



### MOBILE PATTERNS

Rely on tried-and-true mobile UI patterns and practices. Consider the live camera view's effect on UI clarity.



### TEST NOVEL UI

Rapid prototyping and testing of new UI patterns will be necessary to verify efficacy.



### COMMUNITY DRIVEN

UX principles and best practices for AR will need to be continuously tested and revised as a community.



THE END

**Thanks ConveyUX**