OVERVIEW

The Reality, Virtually Hackathon is a 4-day gathering of developers, 3D artists, designers, educators, architects, and video/sound engineers.

The hackathon mission is to cultivate unique innovations in the Augmented and Virtual Reality spaces for:

- Architecture, Engineering and Construction
- Healthcare and Medicine
- Gaming
- Entertainment
- Advertising
- **Education, AR/VR for Good (our category)**

ABOVE

Our project, Luminate, took 3rd place in “Best Everyday Mobile AR Hack”

TIMELINE & STATS

DAY 1 Workshops all day
Hacking begins at 8pm

DAY 2 Hacking continues

DAY #%$? More Hacking—pencils down at 6pm
First-round presentations.

DAY 4 Top 10 finalists present
Awards Ceremony.

375	80	14
Hackers	Teams	Countries

DAY 1: TOP WORKSHOPS

VR for Humans by Humans

Sandra Rodriguez, PhD — Eyesteel Films, MIT Open Doc Lab

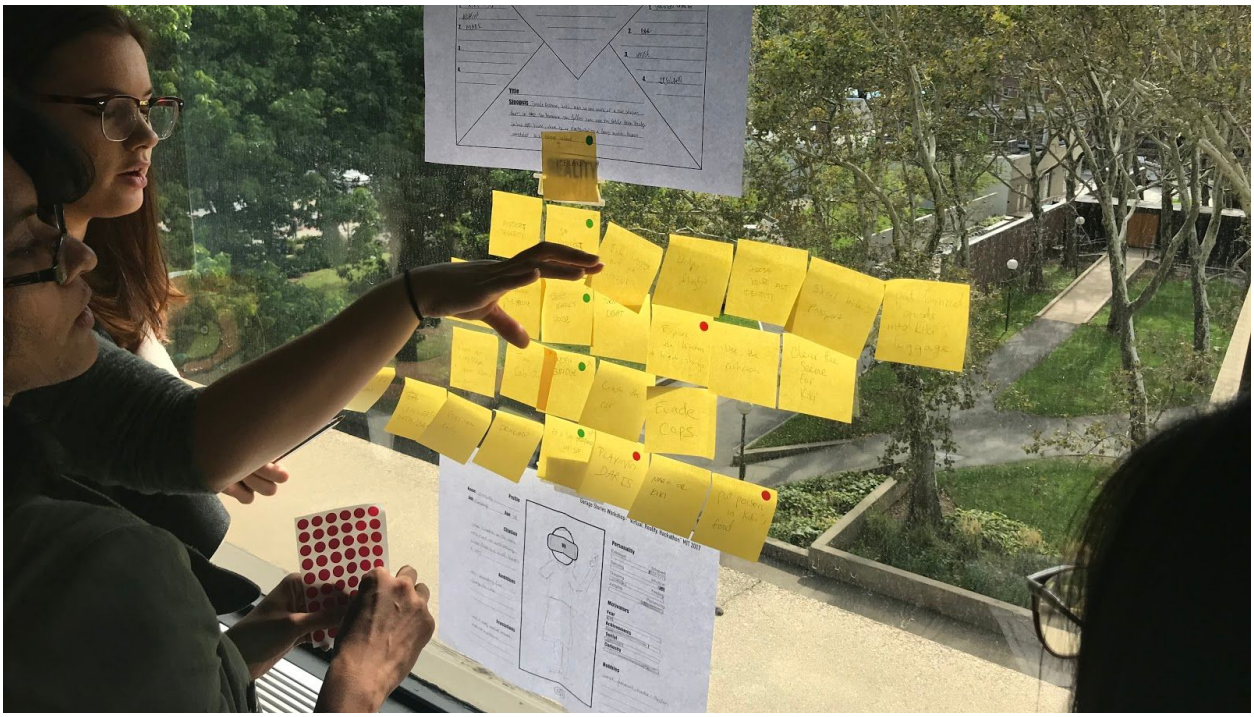
Swiftly into ARKit

Johan Ospina, Next Gen Apps Engineer @ Wayfair

Uncharted Territory in the Mixed Reality Game Space

David Rhodes, Software Engineer @ Mapbox

DAY 1: WORKSHOPS



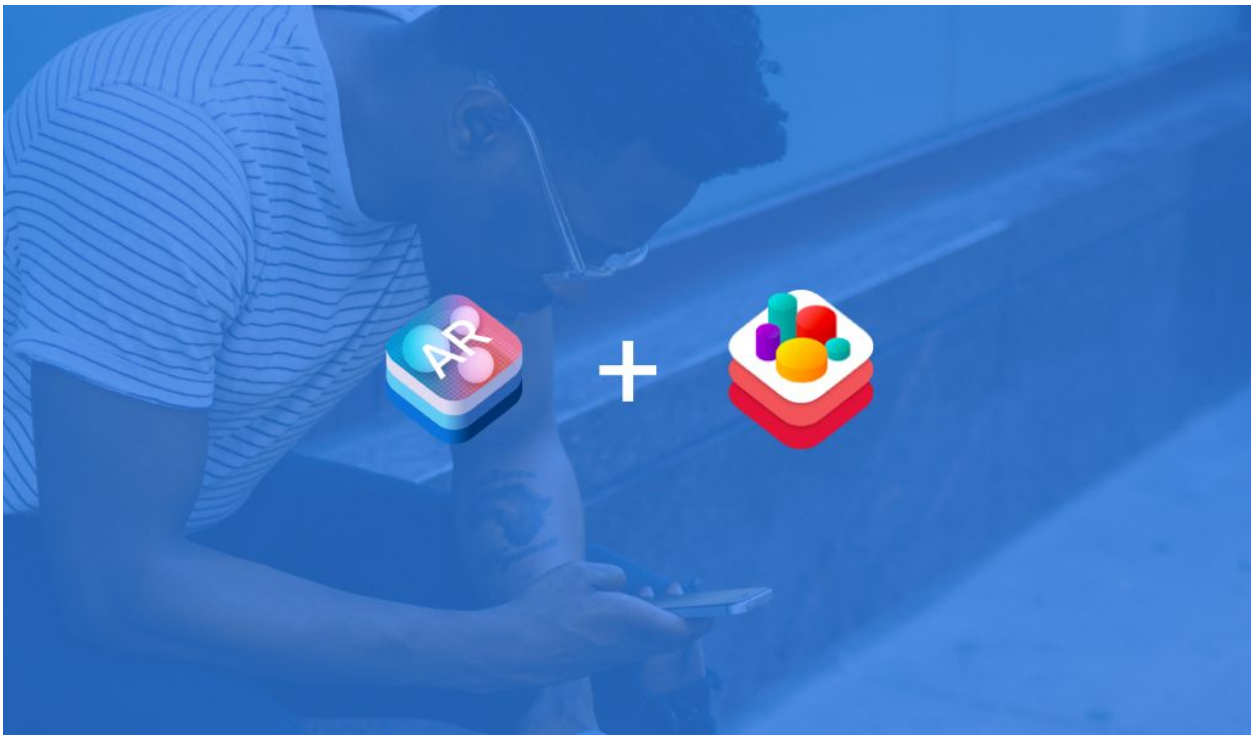
VR for Humans by Humans

Sandra Rodriguez – Eyesteel Films, MIT Open Doc Lab
Marta Ordeig – garagestories

In VR, story isn't told, it's experienced.

- Designing for comfortable "viewing"
    - Fluid movement – 60-90 fps
    - Latency – 50 milliseconds max
    - Camera height is critical
  - Designing "worlds"—who/what are you in the story, space, and interaction?
  - Remember to reward human curiosity.
  - Guide user attention with: arrows, light trails, character head movement, thought bubbles, pointers, spatial sound, voice prompts
- Things you should bookmark: Tree, Do Not Track

DAY 1: WORKSHOPS



Swiftly into ARKit

Johan Ospina, Next Gen Apps Engineer @ Wayfair

In this workshop, Johan gave a high level overview of ARKit, the system-level framework for AR that's shipped in iOS 11. He also glossed over SceneKit, the 3D rendering engine for iOS. He then went over the code that Wayfair used to add AR as a secondary function to their furniture selling app (similar to IKEA Place). It was a great show and tell of what it takes to build an iOS app from scratch using Swift and ARKit.

DAY 1: WORKSHOPS

Uncharted Territory in the Mixed Reality Game Space

David Rhodes, Software Engineer @ Mapbox

This workshop was all about using Mapbox and Unity to build world-scale AR apps. Some examples of this would be AR Navigation and AR billboards. David glossed over high level functionality and capabilities of the Mapbox SDK for Unity and how it could be used with ARKit and ARCore respectively. The takeaway from this was that Mapbox is an awesome service and if we ever need to use maps in an AR app this is the way to go!

The next 48 hours were a blur. So here's some photographic evidence and interesting stats of what we remember from that experience:

3.38hrs

Average amount of sleep Friday & Saturday night

2,250mg

Total amount of caffeine consumed

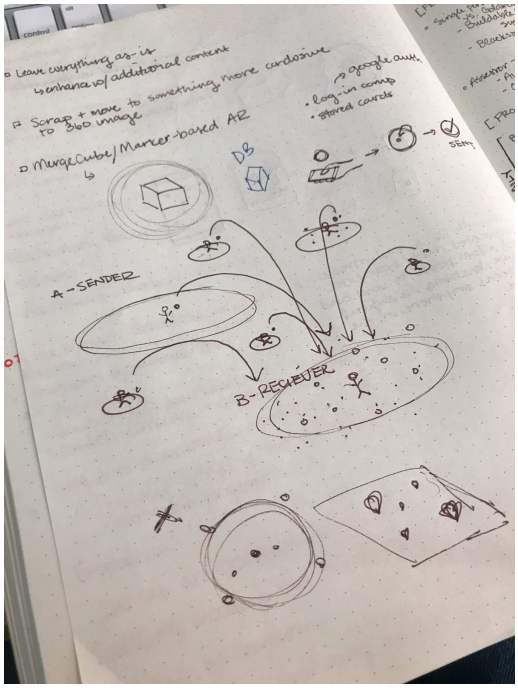
6hrs

Hours spent experimenting with Metal Shaders

ABOVE

The obligatory "before" photo outside the MIT Media Lab.

Our workspace in the Media Lab. No high-tech research environment is complete without purple sofas and a bookcase of full of typewriters, video cameras, and old calculators. ❤



First night burning the midnight oil. At this point, we were working on user flows, illustrations, high-level branding, setting up our repository, and researching ARKit.

12am fuel is essential. 5-shot Lattes and X-Large Mochas are the only thing that keep you moving after 3 hours of sleep.

And even then, sometimes you still fall asleep mid-conversation with your hand on the trackpad.

Just crossed the 6pm deadline. Screencast recorded. Devpost done. At this point, we were waiting for the judging schedule and practicing our pitch.

18 hours later, we found out that we made it to the top 10!

At the awards ceremony, our team accepting the 3rd place “Best Everyday Mobile AR Hack” award from Samsung. Check out the Luminate demo on Devpost.