

# Ambientes Imersivos na Educação

## Oportunidades, Desafios e Riscos



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# Digital Content Journey



**Voice**



**Text**



**Image**



**Video**



**3D**



# MINECRAFT

450M USERS





**350M USERS**

**During Travis Scott concert:**

**11.4M SIMULTANEOUS USERS**

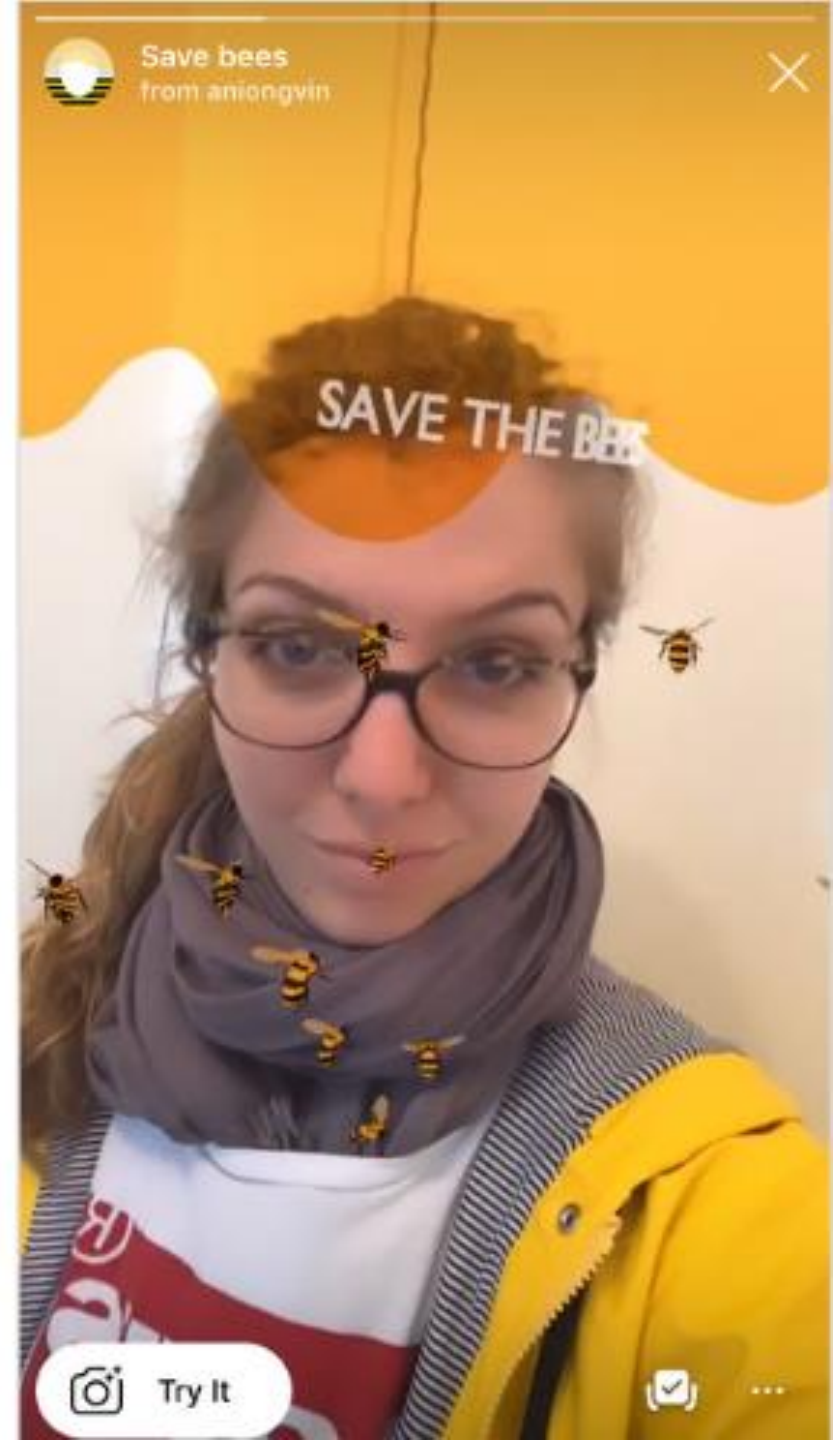






37M USERS













New spaces to learn

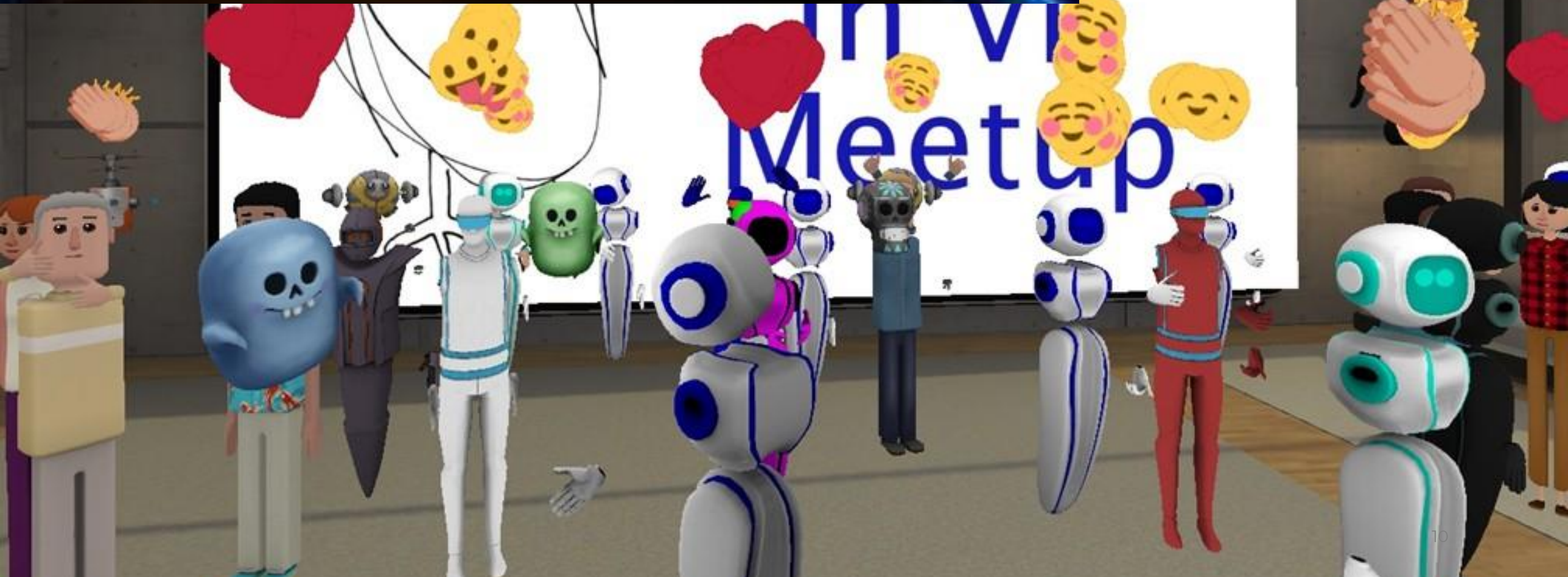




# Educators in VR

educatorsinvr.com

Helping educators, learners, researchers, businesses,  
and passionate enthusiasts integrate VR, AR, and XR  
into education, training, and research.



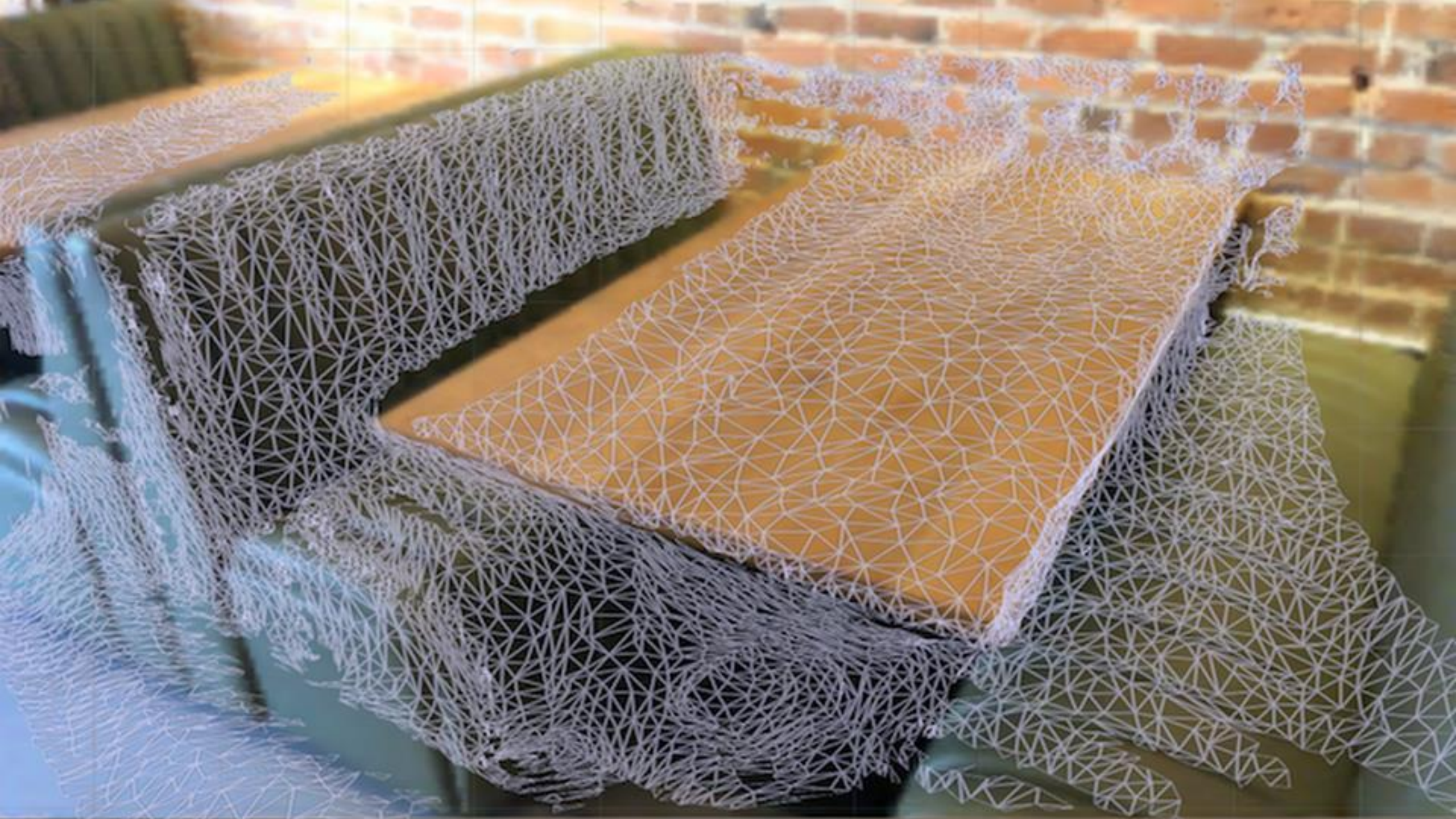




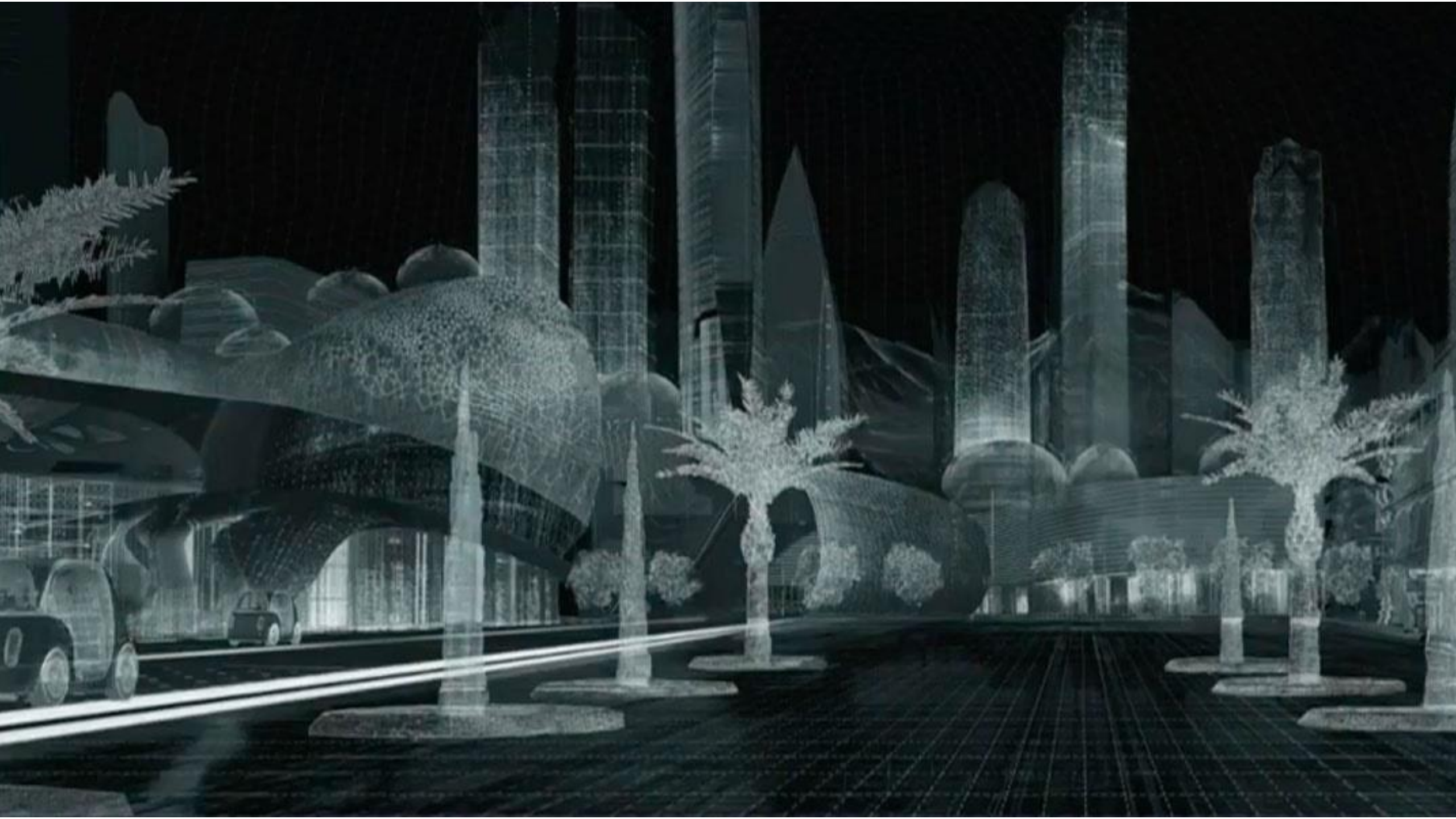
3D Scanner App















HOME

JUNE

28



UNDERGROUND



WORK

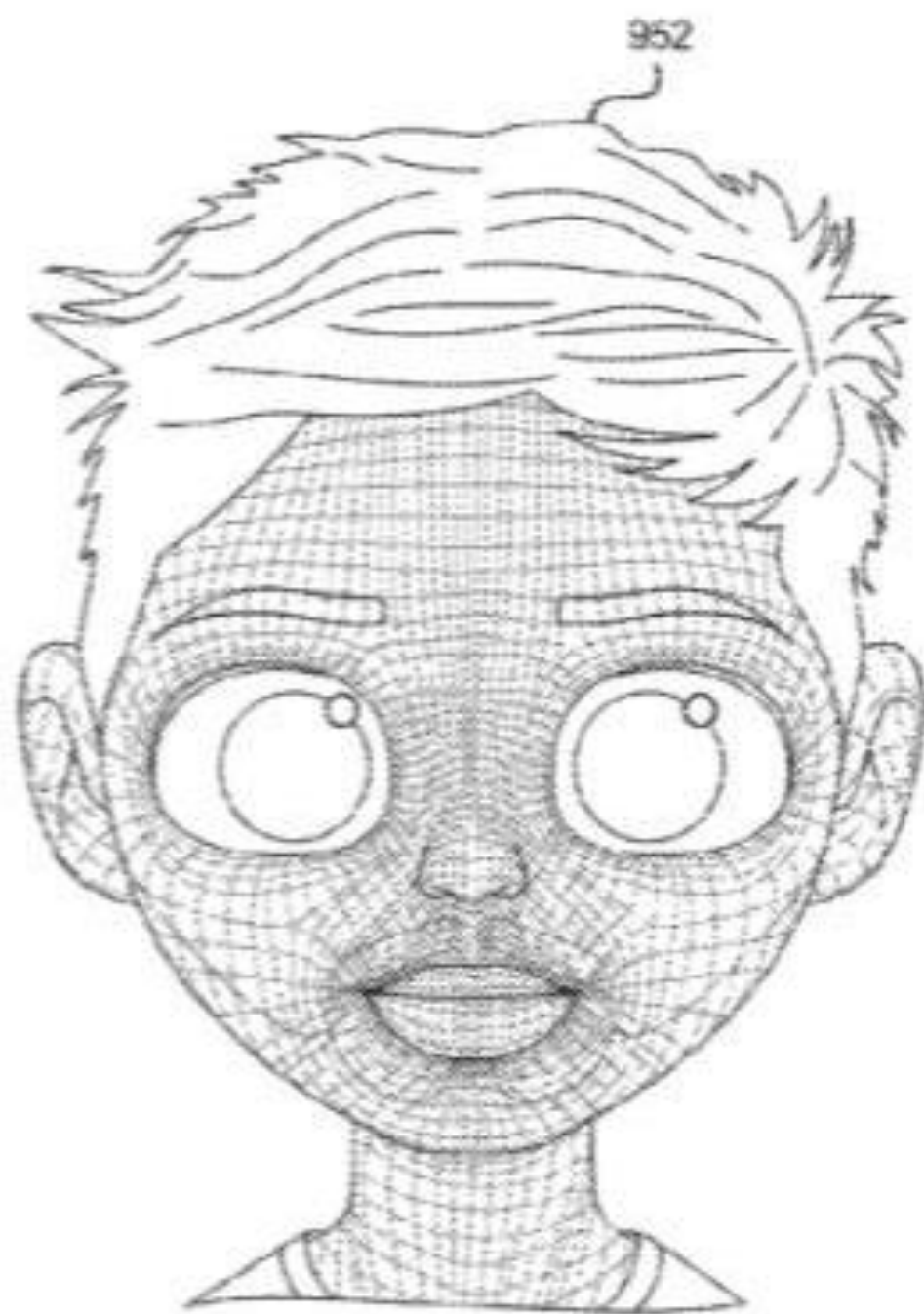
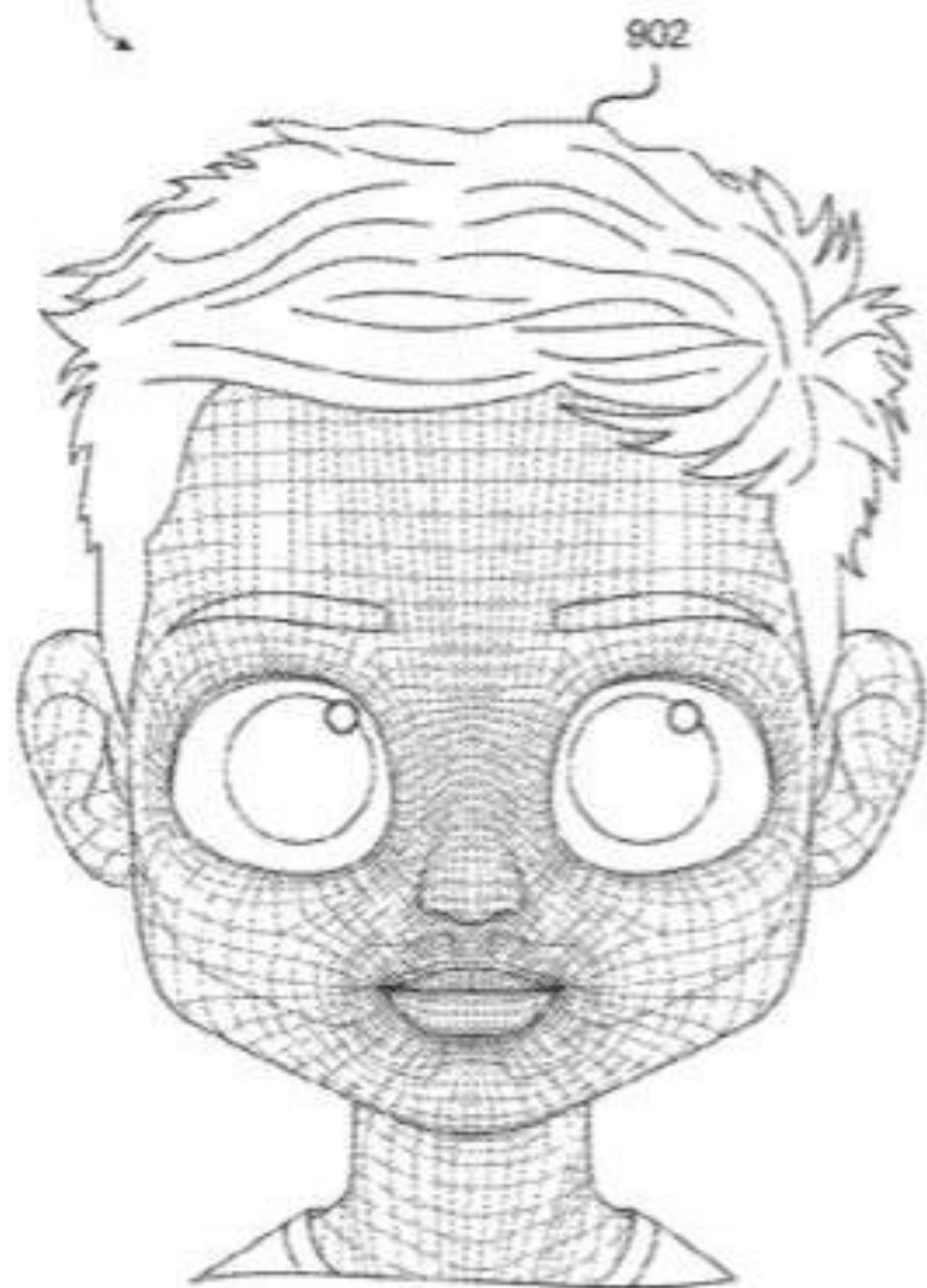
UNDERGROUND





CODEC AVATAR







AI





# Custom worlds







AI avatar powered by  
**ChatGPT** interacting  
with human via the  
**ENGAGE** platform.



# All is run on Data





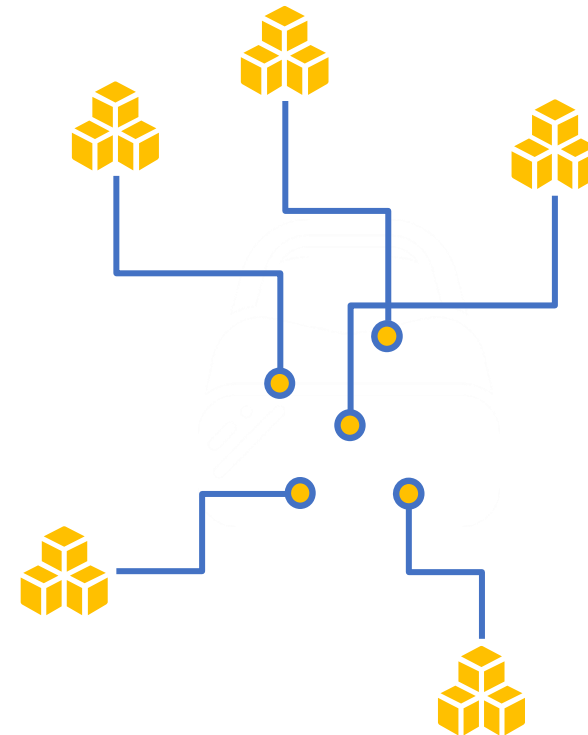
# A whole new level of Data Mining :



Cambridge Analytica had  
5000 data points **per user**

In latest-generation HMDs, body movements are tracked **90 times per second**.

The systems record **18 types of movements** across the head and hands.



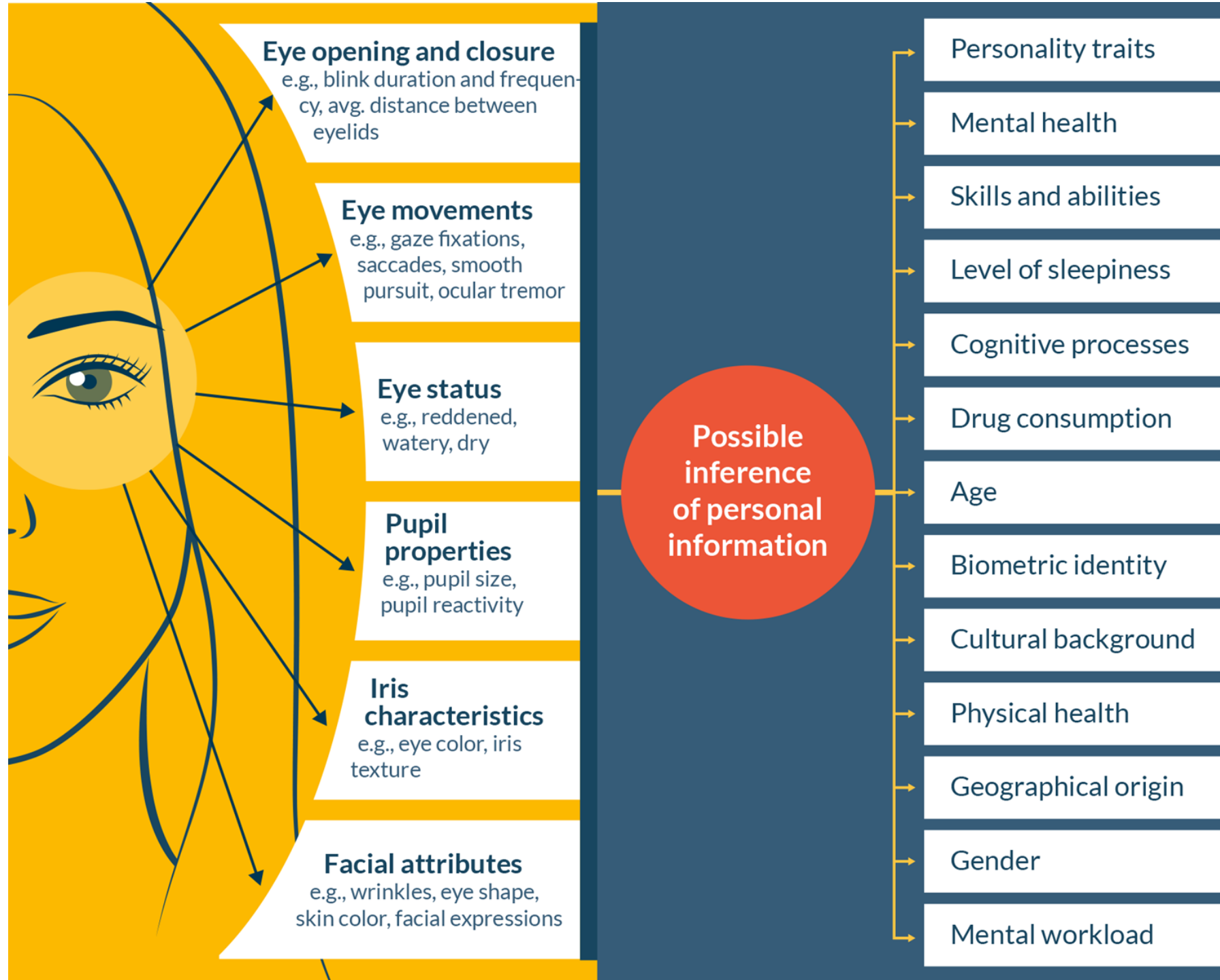
**20 minutes**  
in a VR simulation

**2,000,000**  
unique recordings of body language



# Special Data Type Considerations

B.I.D.  
Biometrically  
Inferred  
Data





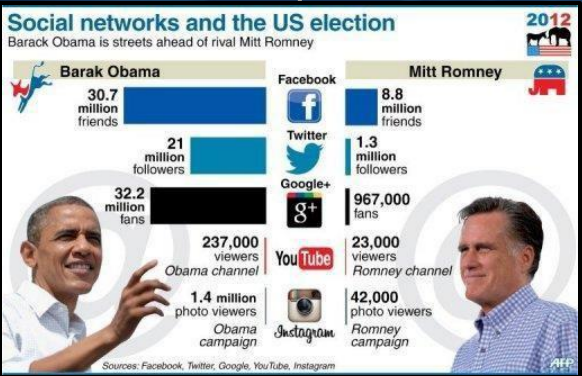
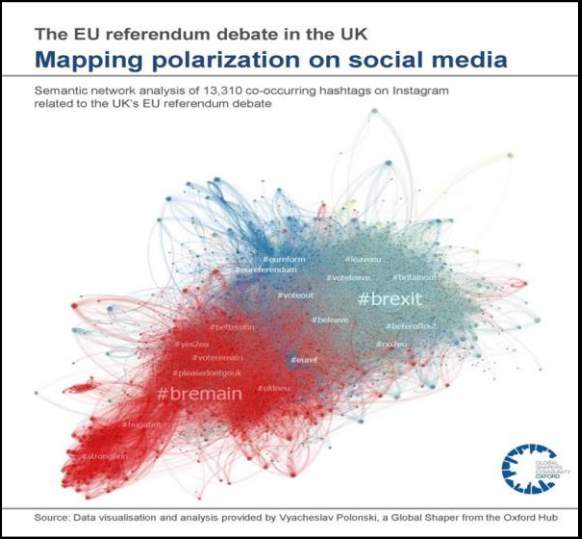
# Children in the Metaverse



	ASSESS	INFORM	MANAGE	PREVENT
0-5 Yrs	Function(s)	Function(s)	Function(s)	Function(s)
6-9 Yrs				Adopting eSafety Commissioner of Australia's Safety by Design Principles
10-12 Yrs				
13-15 Yrs				
16-17 Yrs				



# Data impacts society and shapes our future





# A whole new level of Data Mining : 2016 vs Today

In latest-generation HMDs, body movements are tracked **90 times per second**.

The systems record **18 types of movements** across the head and hands.



Cambridge Analytica had  
5000 data points **per user**



**20 minutes**  
in a VR simulation

=

**2,000,000**  
unique recordings of body language



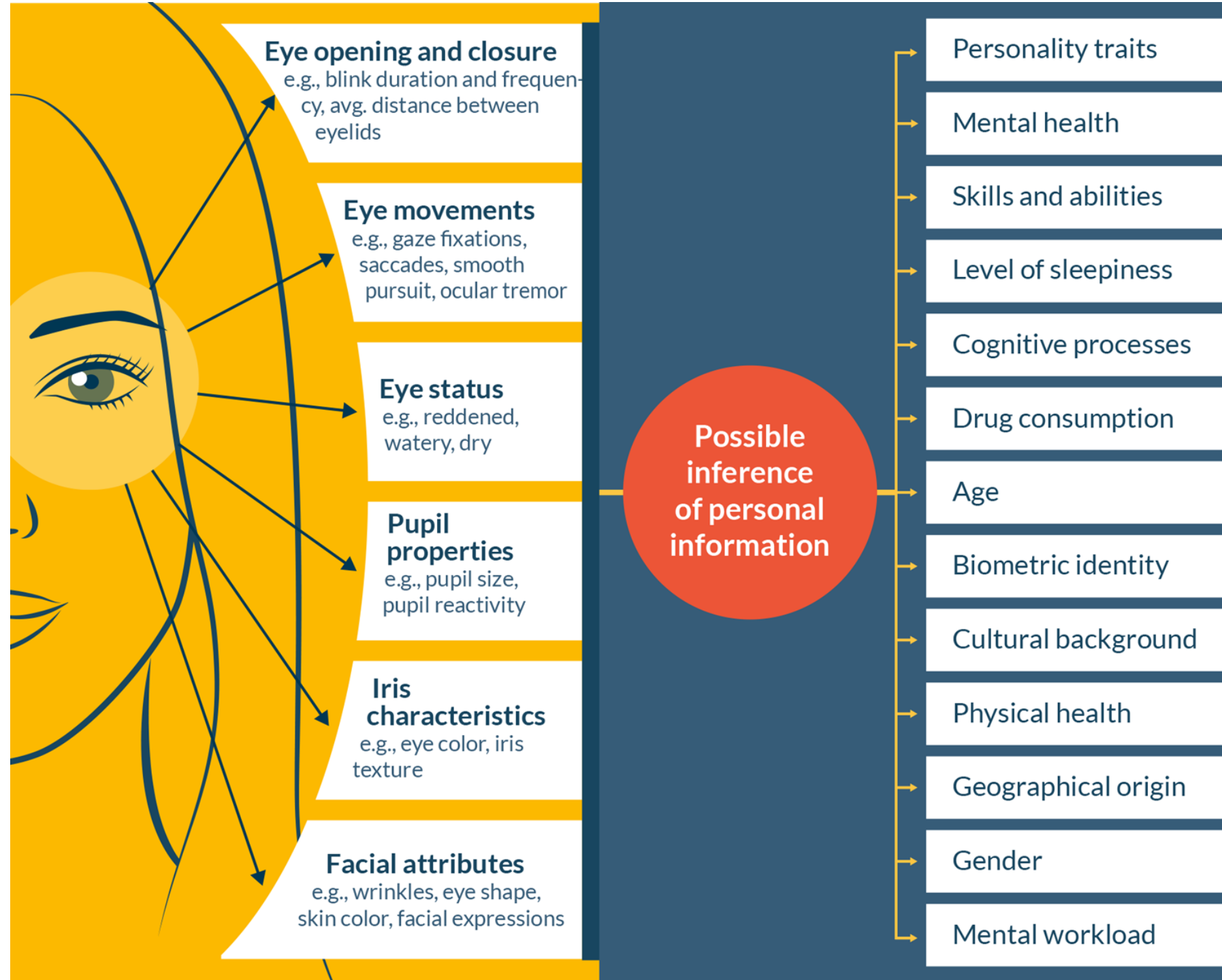
# XR Data





# Special Data Type Considerations

B.I.D.  
Biometrically  
Inferred  
Data





# What's the relationship between **XR Data** and **Human Rights**?

1

## REPRESENTATION

The digital identity is not only a copy of the physical one

2

## OWNERSHIP

Our identity should be interoperable and decentralized

3

## PROTECTION

Laws and tools are needed to safeguard the digital humans





Digital is not physical

Digital is also real





# Luis Bravo Martins



/luismartins



@o\_bravomartins



See  
Beyond  
The  
Hype

LUIS BRAVO MARTINS  
SAMANTHA G. WOLFE

Foreword by  
Martina Welkhoff  
Amy LaMeyer

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amazon

BARNES&NOBLE

WILEY



# Luis Bravo Martins



/luismartins



@o\_bravomartins

## Metaverse Toolbox for Educators:

- Virtual rooms - [www.vrland.io](http://www.vrland.io)
- Augmented Reality 3D visualization – [www.sketchfab.com](http://www.sketchfab.com)
- Augmented Reality experience creator – [www.zappz.com](http://www.zappz.com)
- AR Experiences Co-creator: [www.cospaces.io](http://www.cospaces.io)
- Another AR Experience Co-Creator:  
<https://edu.assemblrworld.com/assemblr-edu-app>
- Adobe AR creation software -  
<https://www.adobe.com/pt/products/aero.html>
- 1st grade Maths and physical exercise -  
<https://apps.apple.com/us/app/math-ninja-ar/id1274871322>
- AR Space scanner -  
<https://apps.apple.com/by/app/hyperspace-ar/id1537114898>
- 3D Scanner app - <https://apps.apple.com/us/app/3d-scanner-app/id1419913995>
- VR for classroom - <https://www.classvr.com>
- Metaverse University Campus - [www.victoryxr.com](http://www.victoryxr.com) & [www.eduverse.com](http://www.eduverse.com)
- Google Arts and Culture Virtual trips -  
<https://artsandculture.google.com/project/expedition>