

# AVATAR dimension

Mixed Reality Capture Studio & Technology

Washington DC





## VIDEO REIMAGINED

Avatar Dimension is driving the future of immersive video with one of the most advanced volumetric capture stages in the world.

Located in the Washington DC area, we are the only Microsoft certified volumetric capture studio on the east coast of the United States.



## SPATIAL ENGAGEMENT

As one of only five studios in the world certified to use Microsoft's Mixed Reality volumetric capture pipeline, Avatar Dimension offers advanced capture solutions and data compression for creating sophisticated immersive experiences.

We are a team of industry veterans focused on creating stunningly realistic virtual experiences to change the face of training and education for business, government, institutions, and entertainment.



Antonio Douthit-Boyd for COCA St. Louis

## HOLOGRAMS FOR THE REAL WORLD

At Avatar Dimension, we record volumetric video – creating 3D holograms of dynamic people and performances from every angle.

Use web, mobile or head-mounted devices to place holograms into real-world settings, blending the digital with the physical.



## IMMERSIVE REALITY

Integrate 3D holograms into virtual environments for your immersive web-based experience or on Quest VR and Windows MR devices.

Our technology allows us to record precise body movements and detailed facial expressions, opening radical new content creation opportunities.





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The future starts west of Washington DC in Ashburn, VA, also known as the “Center of the Internet.”

Our high tech studio is purposely located in the Sabey Company’s Intergate Ashburn complex near Washington, DC. Avatar Dimension is perfectly situated to work with the region’s many enterprises, government agencies, military centers, health care companies, and entertainment businesses, as well as customers globally.



## BUILT FOR SPACE AND MOVING FORWARD

Avatar Dimension's 4,000 square foot studio is situated in the heart of Sabey Data Centers Intergate Ashburn.

The studio is an open space environment that features a green room, client area, and offices, with backup power, worldwide fiber connections, all in a highly secure facility.

Tour our studio by visiting:  
[tour.avatar-dimension.com/](http://tour.avatar-dimension.com/)



### NORTH STUDIO

Clients and guests can view the action happening in the stage in the large spacious viewing room which is accented by a video wall that is comprised of sixteen 55" monitors.



### SOUTH STUDIO

This open space office has a number of desks and 3 conference rooms. Perfect for clients who still need to conduct business during production.



### GREEN ROOM

Located in the North Studio side next to the stage, our ample size green room with bathroom is the perfect space for talent to prepare. There is also a game room nearby for them to unwind.



### CLIENT CONFERENCE ROOMS

There are three conference rooms available for clients and their teams to use. Two of the rooms have large connected monitors for presentations or virtual meetings.

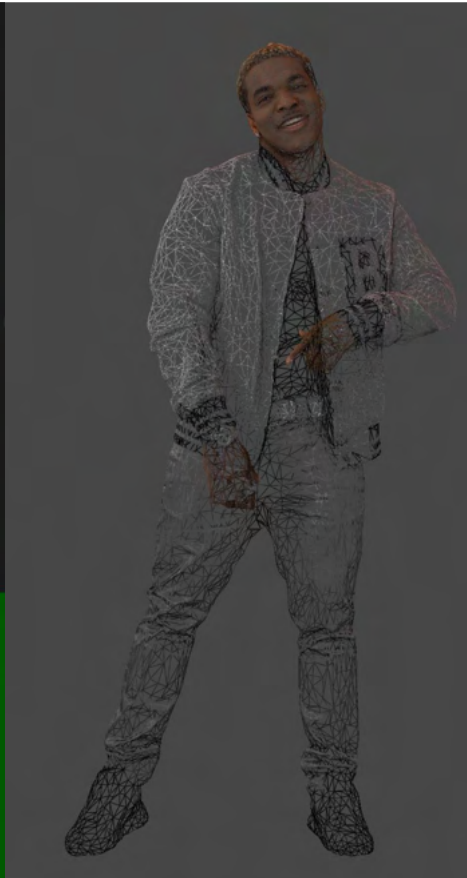
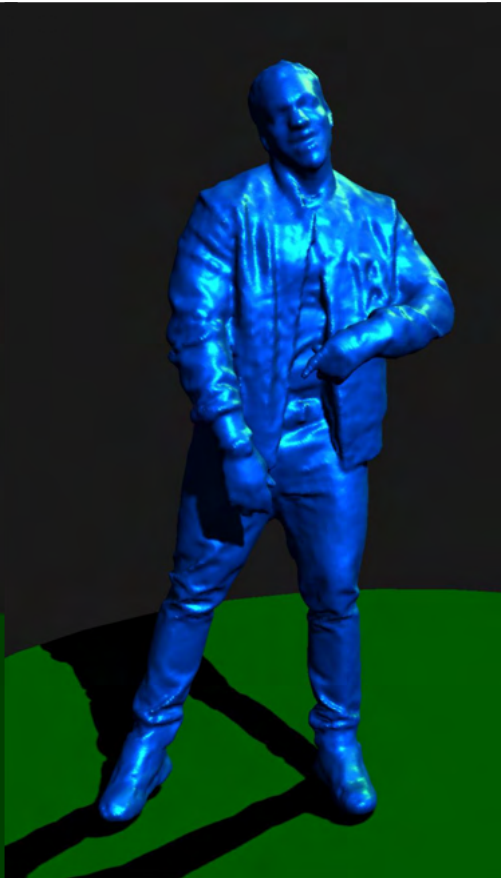


## A STAGE FIT FOR THE FUTURE

### AVATAR DIMENSION STAGE BY THE NUMBERS

- 70 IO Industries Volucam volumetric cameras
- 4,000 square foot studio
- 30 or 60 FPS and 2K/4K surface textures
- Standard configuration is an 8-foot diameter circle
- Max capture height is 8-feet
- Fully customizable RGB lighting
- Sound proof





### CAMERA RESULTS

- 39 RGB
- 31 IR

### POINT CLOUD

- Millions of points

### SMOOTH MESH

- Hundreds of thousands of triangles
- Decimated to desire results
- Detailed preservation (i.e. face)

### TEMPORAL MESH

- Mesh tracking keyframes
- OBJ mesh
- PNG texture

### FINAL MP4

- H264 compressed MP4 3D video file (needs special plug-in for 3D playback)
- OBJ/PNG output optional
- Compressed file size: 100-400MB per 30 secs at 30FPS

### PLATFORMS



Our mission is to support experiences using volumetric content for the widest audience possible. We are constantly broadening playback support.



# PRODUCTION

If you have been on a video shoot, our capture process will feel familiar. And where its different, our tech and stage team will be there to provide you with a wide base of support.

We start every project with a series of test shoots. We test wardrobe, hair, props, lighting, and any other components unique to your project. This crucial step gives you the confidence that the material generated over the course of the production will be exactly what you're expecting.

We know the ins and outs of volumetric capture. Our crew applies an eagle eye to every detail of your session, keeping quality and schedule on track.

Jake Sotriadis for US Air Force



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# POST-PRODUCTION

When post-production is required, our technical art team is ready to support you with scripts, tools, shaders, and workflows designed to get the most out of your content.

We'll give you preview movies to review performances so that you are involved in every step. Our goal is to provide you with content ready to drop into your experience on any device, with no need to do extensive clean-up.



**RELIGHT** We use Maya, Arnold, V-Ray, etc to render complex lighting information, then bake back out to a compressed MP4.

**ENVIRONMENT** Our team of technical artists can design and create ultra realistic digital environments using Unity and Unreal Engine.



**ROTOSCOPING** We have a Maya workflow and tool that for adding simple animated objects and props post capture.



**EDIT** mesh and texture sequences with standard DCC tools like Maya, Photoshop and Nuke.



**AUDIO** is captured as a basic mix for review, but our audio engineers can sweeten and enhance the audio to a perfect mix.

# VOLUMETRIC CASE STUDIES



## Emmersive Entertainment and “60 Minutes+”

Award winning rapper Flo Rida and his business venture Emmersive Entertainment, teamed up with Avatar Dimension to produce a unique volumetric capture of his chart-topping single “Low.”

The digital performance would be sold as an NFT to fans across the world. The iconic news program “60 Minutes” was there to cover this game changing technology as part of their series on the MetaVerse.

View the “60 Minutes+” segment at:  
[Vimeo.com/avatardimension](https://vimeo.com/avatardimension)



## Microsoft Ignite 2021 Presentation

Avatar Dimension captured the 3D holograms of world renowned marine biologists Edie Widder and Vincent Pieribone as part of the Microsoft Mesh virtual presentation in AltSpace VR.

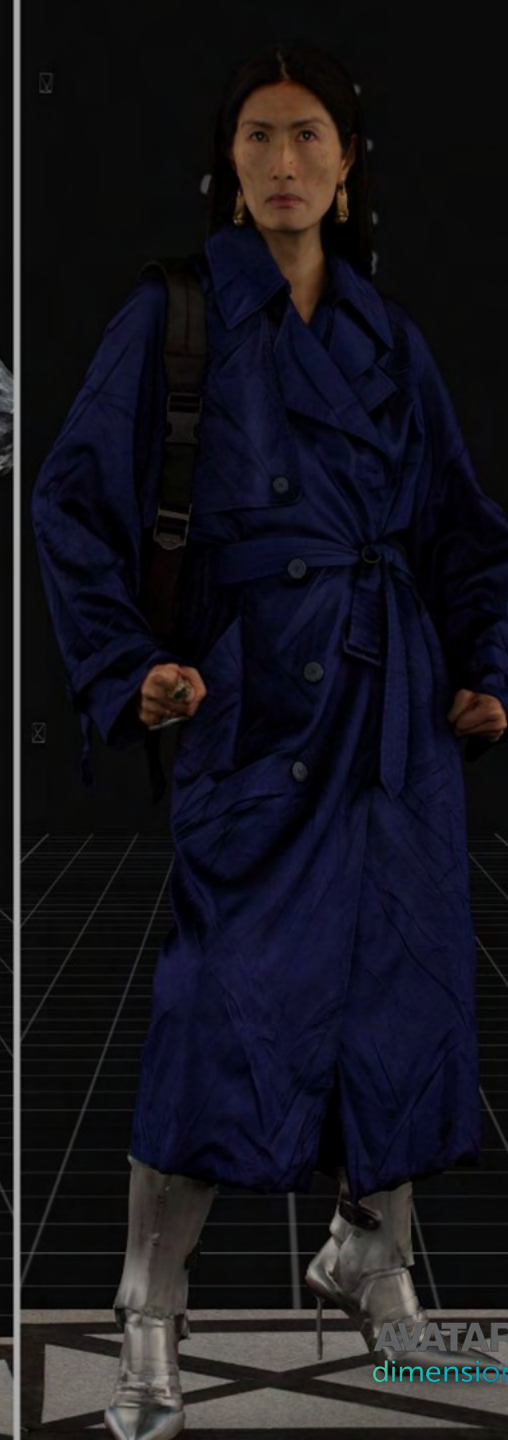
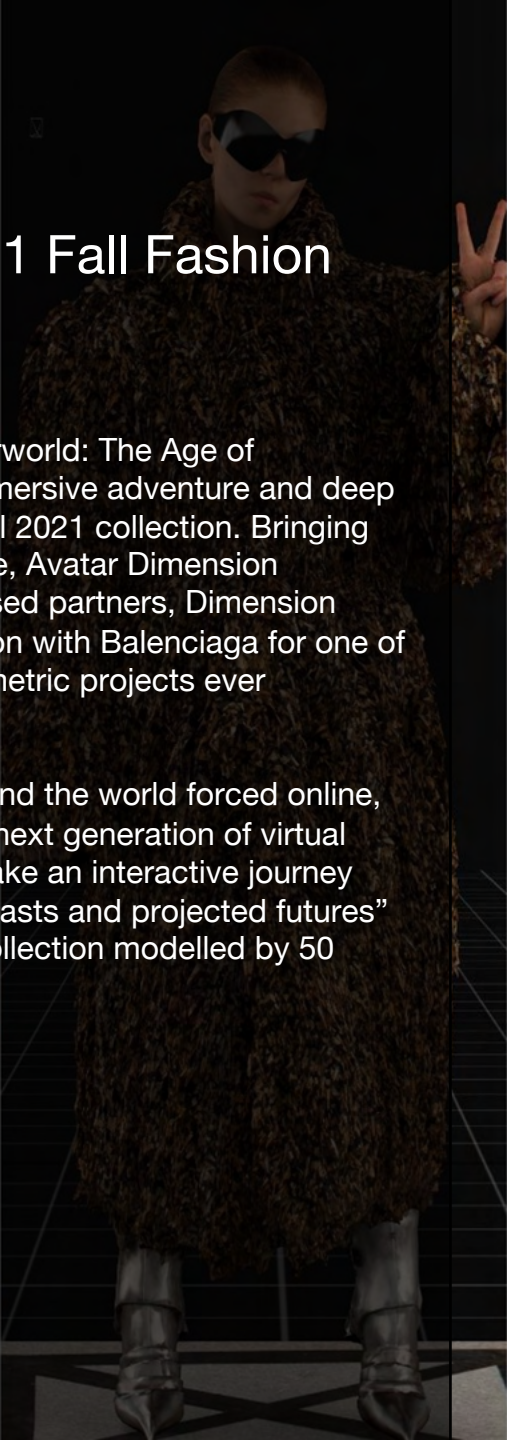
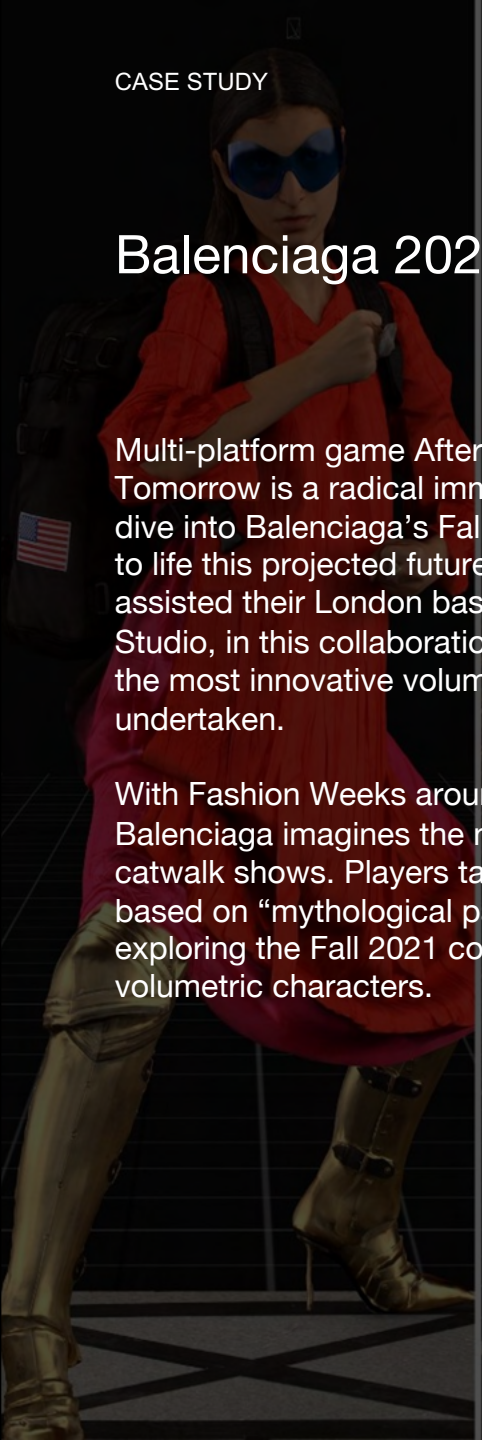
This groundbreaking keynote featured film director James Cameron and Microsoft Mixed Reality lead developer Alex Kipman.



## Balenciaga 2021 Fall Fashion

Multi-platform game Afterworld: The Age of Tomorrow is a radical immersive adventure and deep dive into Balenciaga's Fall 2021 collection. Bringing to life this projected future, Avatar Dimension assisted their London based partners, Dimension Studio, in this collaboration with Balenciaga for one of the most innovative volumetric projects ever undertaken.

With Fashion Weeks around the world forced online, Balenciaga imagines the next generation of virtual catwalk shows. Players take an interactive journey based on "mythological pasts and projected futures" exploring the Fall 2021 collection modelled by 50 volumetric characters.



## COCA Virtual Web Tour

Due to the COVID-19 pandemic, the live-entertainment industry was hit with monumental challenges, including how to adjust business operations for fewer in-person experiences.

COCA, the Center of Creative Arts, located in St. Louis, partnered with Avatar Dimension to explore new ways to engage an increasingly digital and virtual art community via volumetric capture which turns humans and objects into holographic 3D images that look real from any angle.

The result was COCA's virtual webtour, a first-ever online experience that marries high-quality 360° photographs with photo realistic volumetric 3D holograms. The immersive tour brings viewers inside COCA's newly renovated campus, connecting with COCA leadership and artists for an innovative web experience.

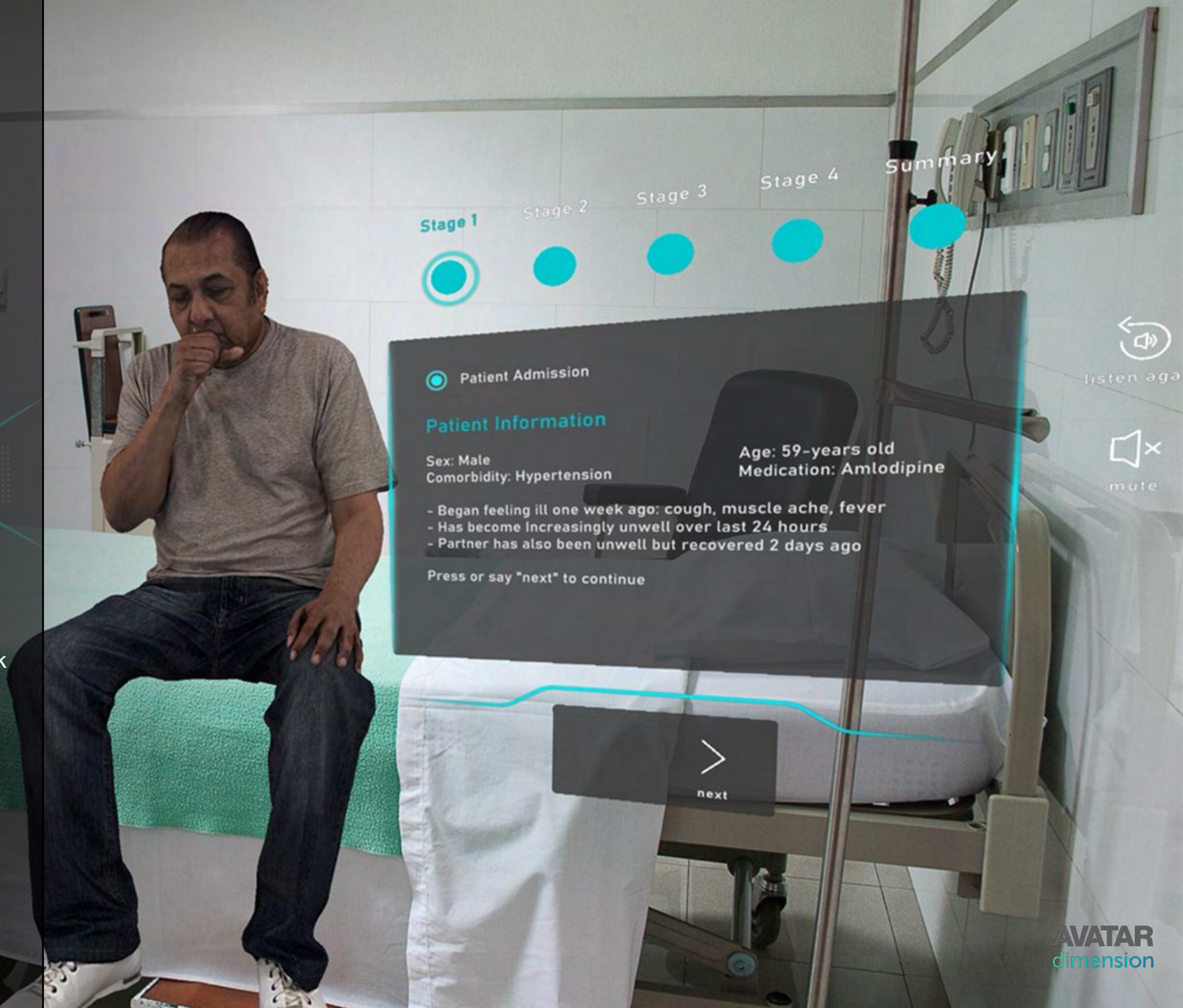




## HoloPatient: COVID 19 Training

HoloPatient: COVID-19 was designed and created in collaboration with the NHS and Health Education England in response to the need for high-quality, safe, immersive training materials during the ongoing pandemic.

As a learner, HoloPatient: COVID-19 uses photo-realistic holographic video of a standardized patient to guide you through four stages of the illness. It helps you recognize the signs and symptoms typical of a Covid-19 patient; model the assessment and risk stratification of such patients; and understand the signs and symptoms indicating deterioration and need for escalation of care. HoloPatient:COVID-19 was made in partnership with the NHS, HEE, Dimension Studios, Fracture VR and Microsoft.



## Sky Sport British Open

At the 148th Open Championship, Sky Sports launched Sky Scope: its new free-viewpoint swing analysis segment. Featuring an incredible use of volumetric capture technology, it allows a full 360-degree inspection of a golfer's swing and for pundits to analyse it like never before.

The golfers were filmed in Avatar Dimension's London based partner, Dimension Studio's new Polymotion Stage, the world's first mobile 3-in-1 solution volumetric capture studio. Set up right on the practice range, golfers were in-and-out within minutes and their holograms were aired on Sky Sports only 48 hours later.



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