

Centre for Innovation/ New Media Lab

The New Media Lab of the Centre for Innovation brings together teachers and creative professionals to explore new technologies such as Virtual and Augmented Reality, that will allow students to engage with academic education through purposeful projects that unite storytelling with innovative visual technologies.



Products: Mixed Reality, Virtual Reality, Graphic Design, High Quality Video

Example: <https://www.youtube.com/watch?v=7mcFQRpdsIQ>

Tools: TV Studio, VR Glasses, VR Camera, Microsoft HoloLens, Writing Tablets, Self recording sets

<http://centre4innovation.org/labs>



The Microsoft HoloLens

It's augmented reality, not virtual reality

The lens scans the environment and works with your surroundings

Holograms are interactive

Virtual objects can be stationary while you move



New Media Lab

- Explore and evaluate
- Introduce
- Play and inspire
- Develop and co-create
- Communicate
- Evaluate



New Media Lab Projects



AR Experience



Met holografische projectie naar onderwijs op maat



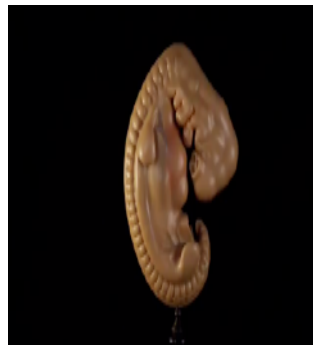
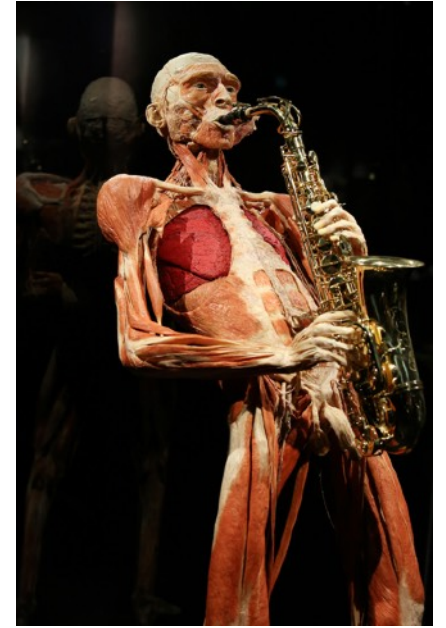
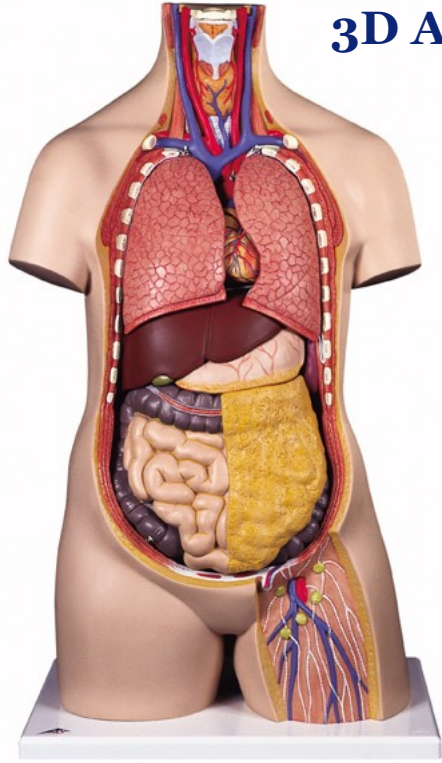
Innovation Challenge | LUMC/New Media Lab 2016



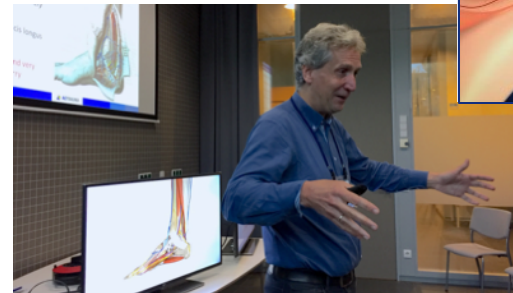
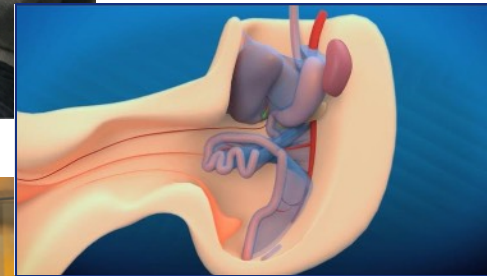
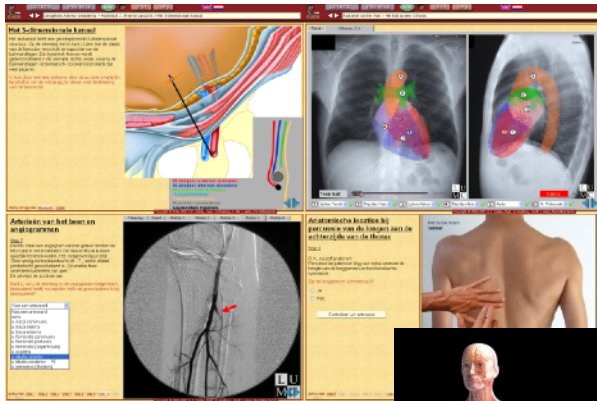
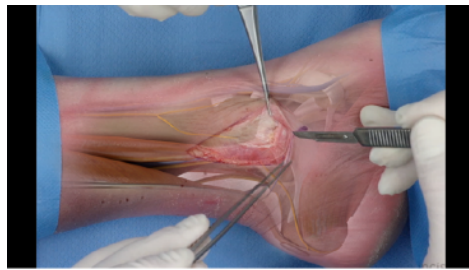
**Universiteit
Leiden**
The Netherlands



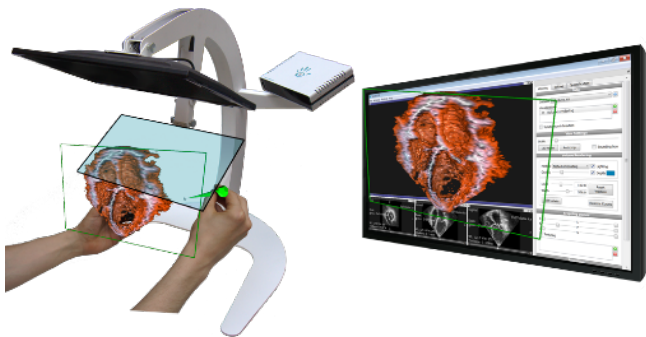
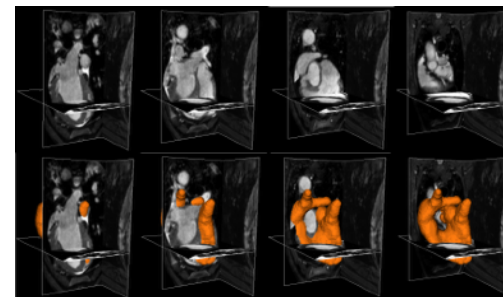
3D Anatomy

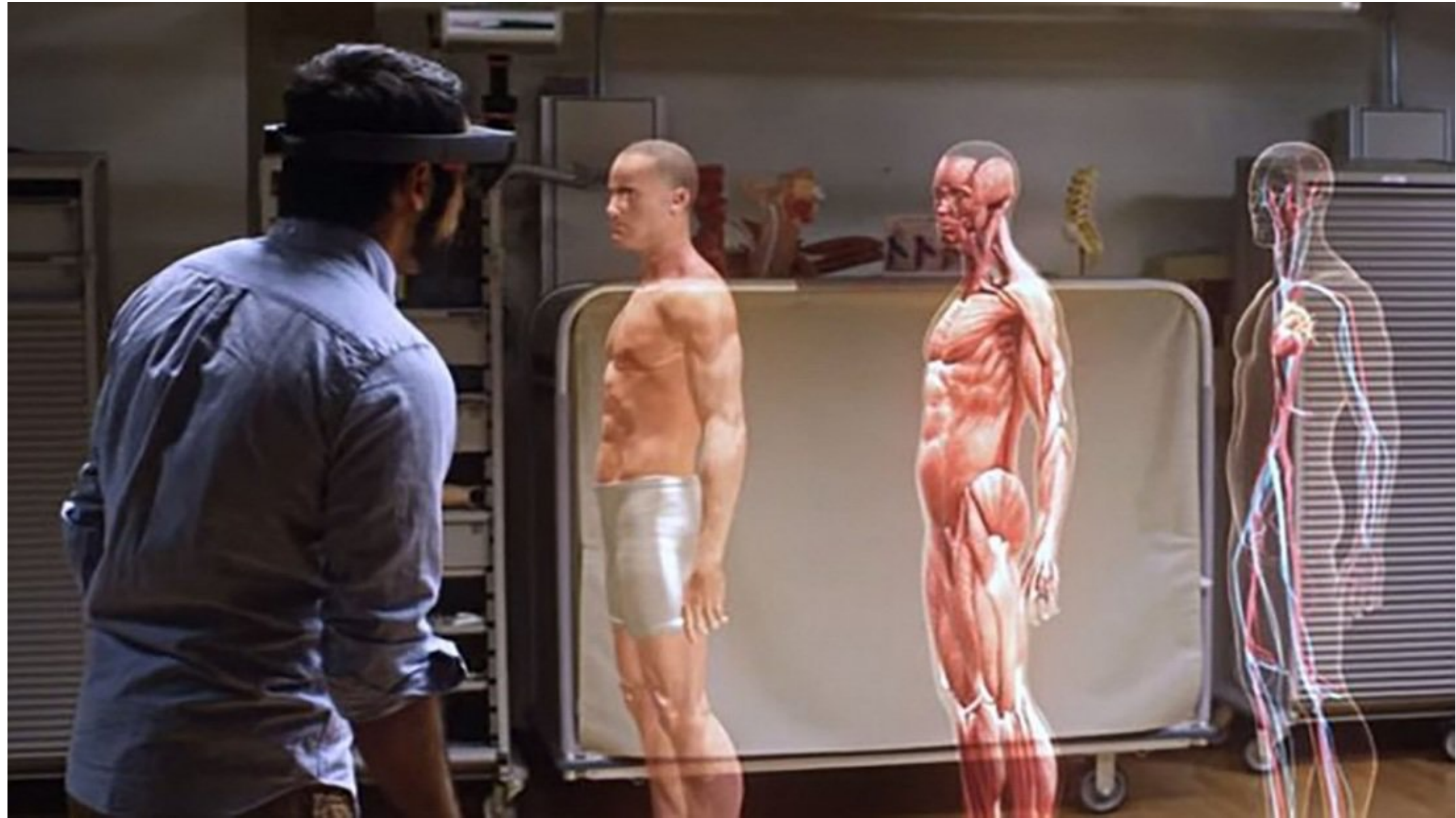


Online anatomy platform CASK/TOOL



Massive Open Online Course *Anatomy of the abdomen and pelvis*





The Project

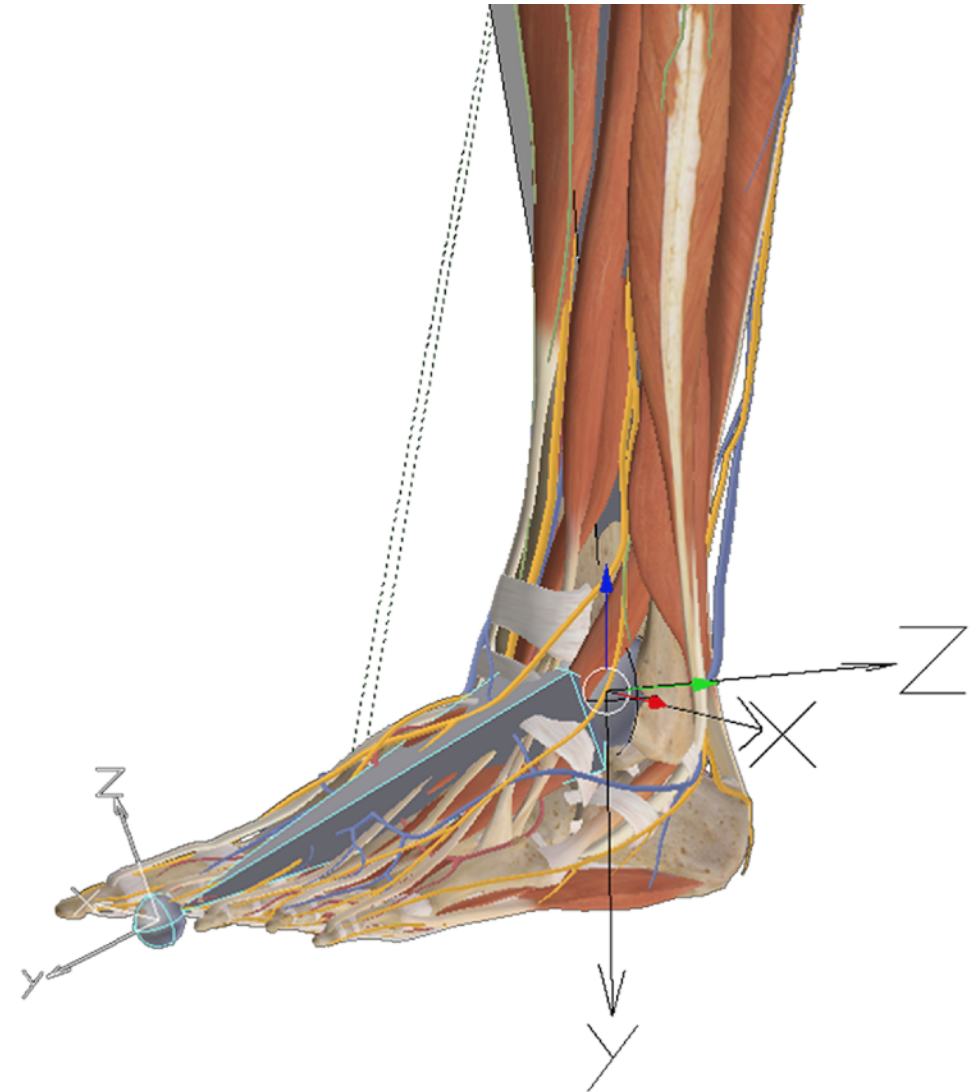


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Exploring MR technology for (bio)medical education

- Using virtual anatomical models in classroom setting (*collaborative learning*)
- Linking virtual anatomical models to the real life human body (*affective learning*)
- Learning from (natural/pathological) body restrictions (*personalized learning*)
- Using 'gaming' scenario and direct feedback to boost motivation (*explorative learning*)



Problem

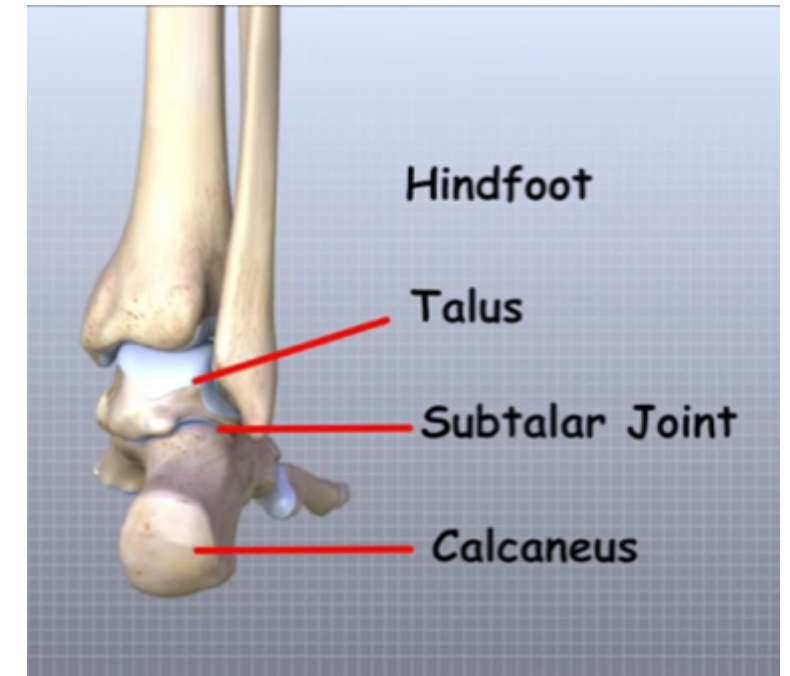
Supination



Pronation



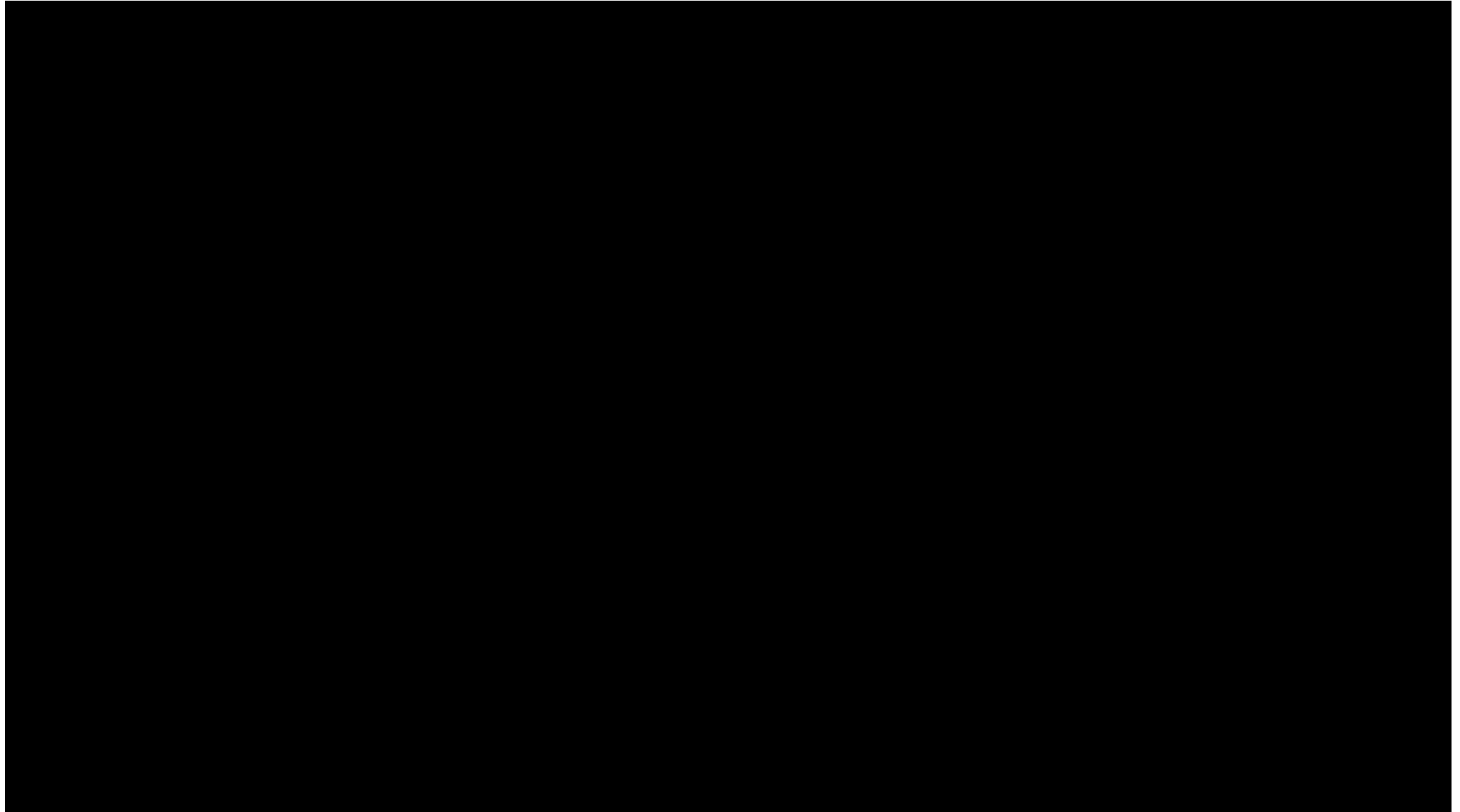
Flexion/Extension



Randale Sechrest – eOrthopod.com

Foot Anatomy Animated Tutorial - <https://www.youtube.com/watch?v=ROd1Acma64o>

Inspiration

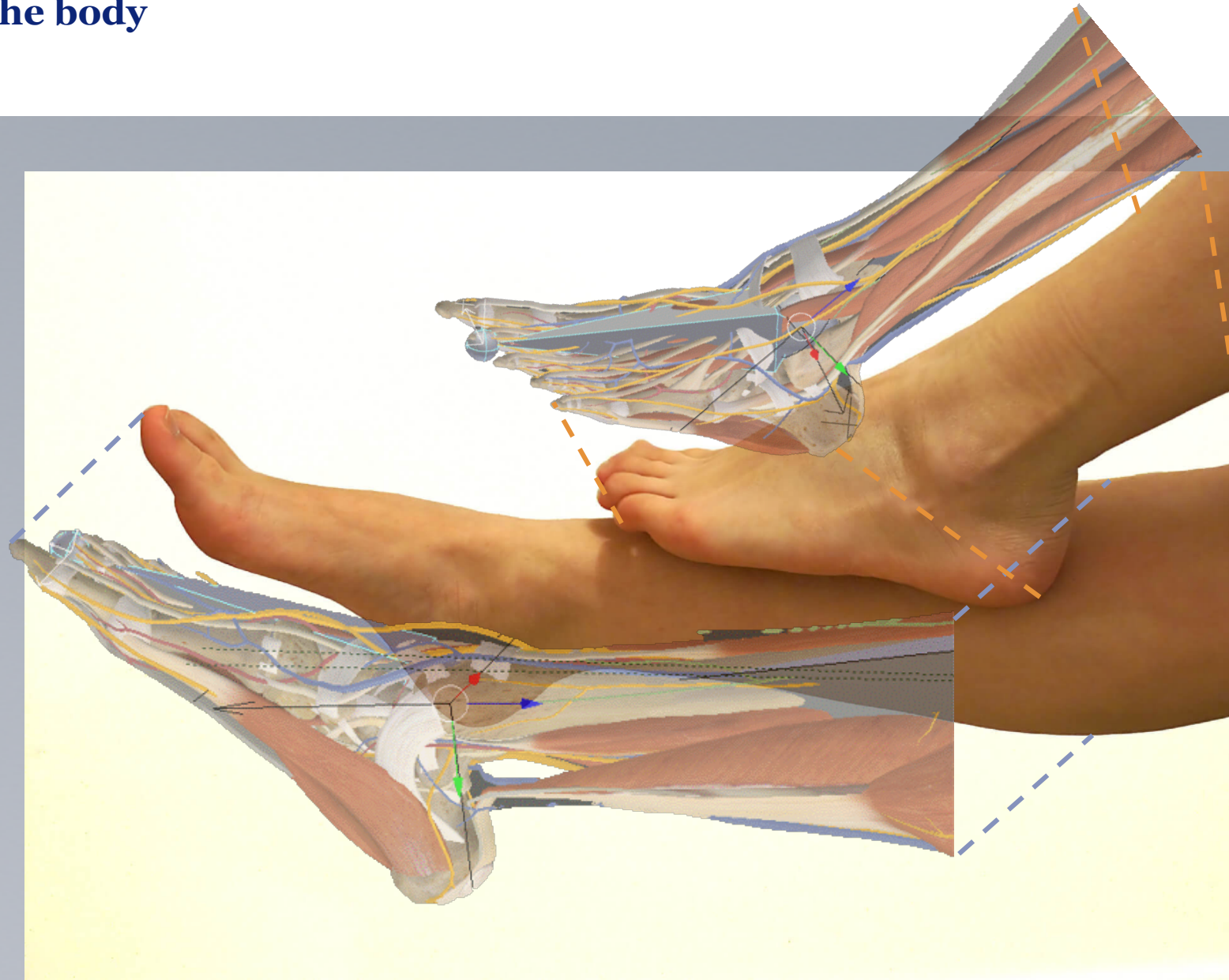


Using the HoloLens in Motion Capture / Dance / Visual Effects production - <https://www.youtube.com/watch?v=THocDgV4yEQ#t=1m02s>

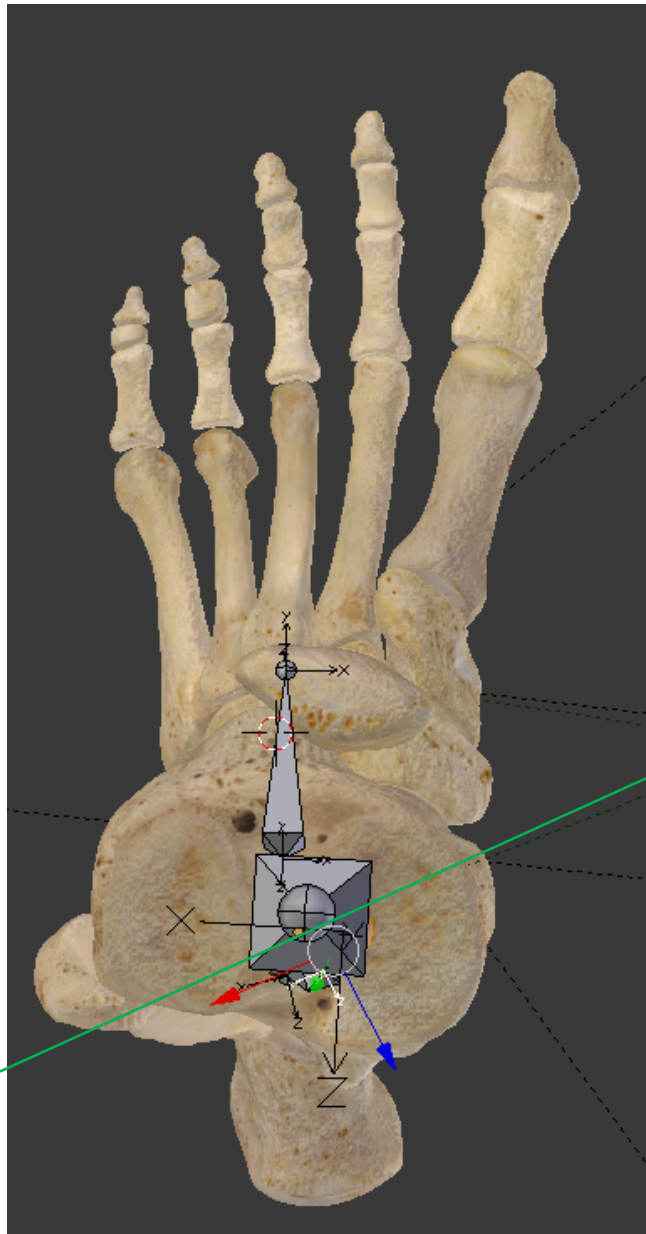
The project



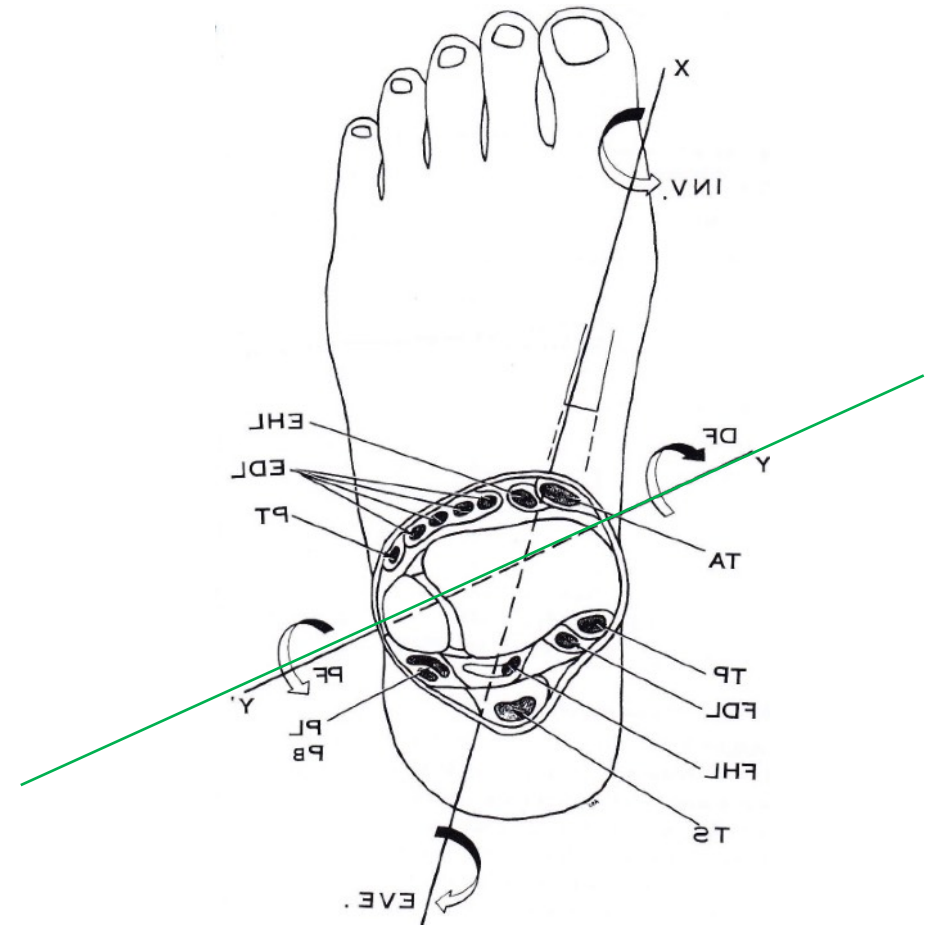
Fixation to the body



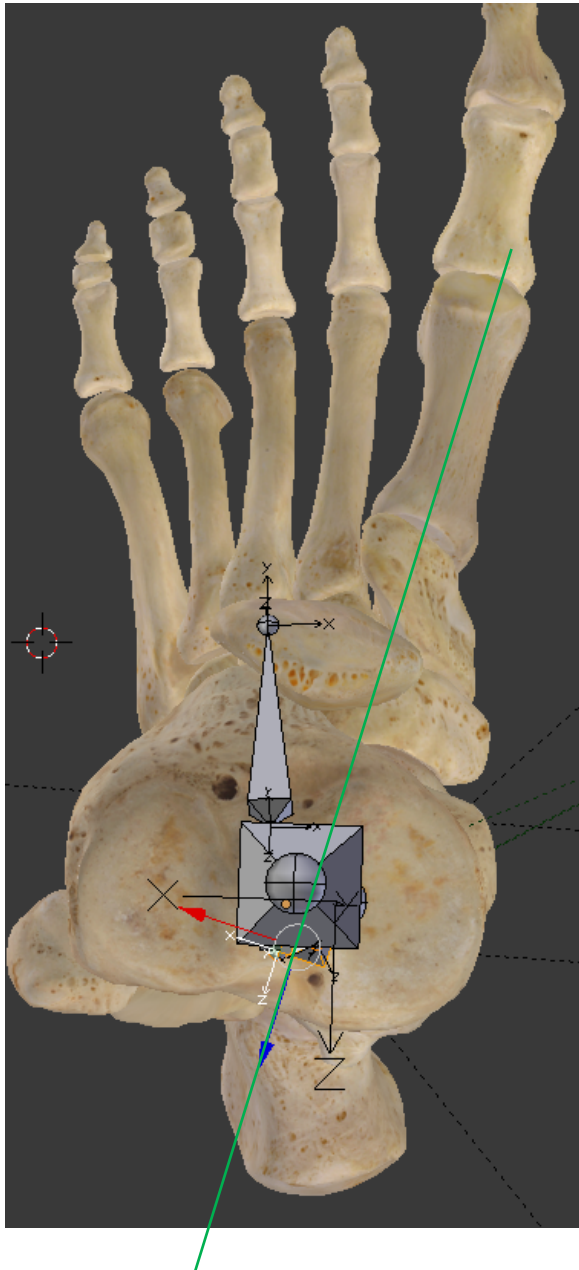
Where we are now?



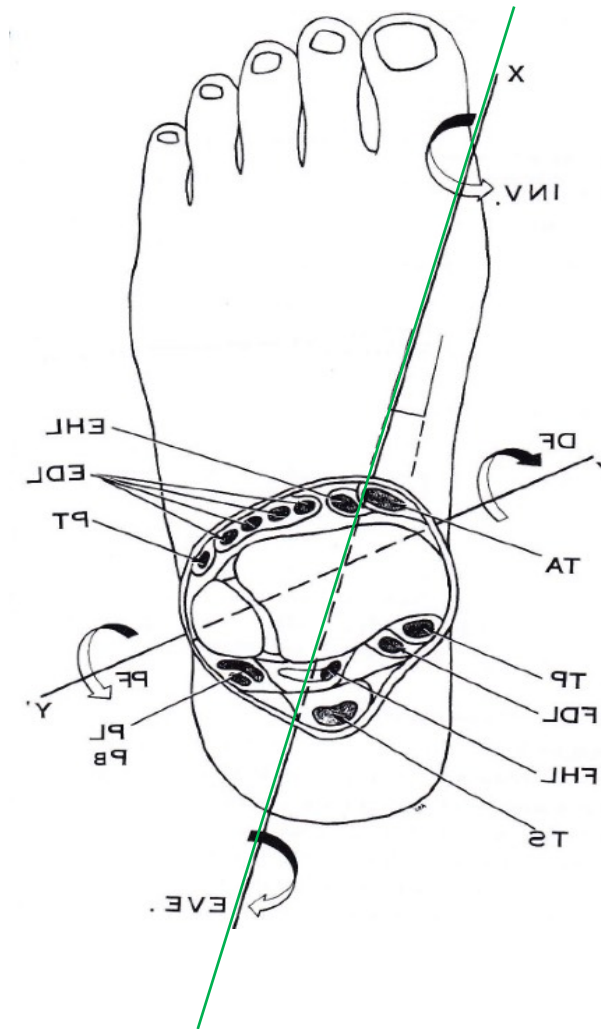
Tibiotalar joint



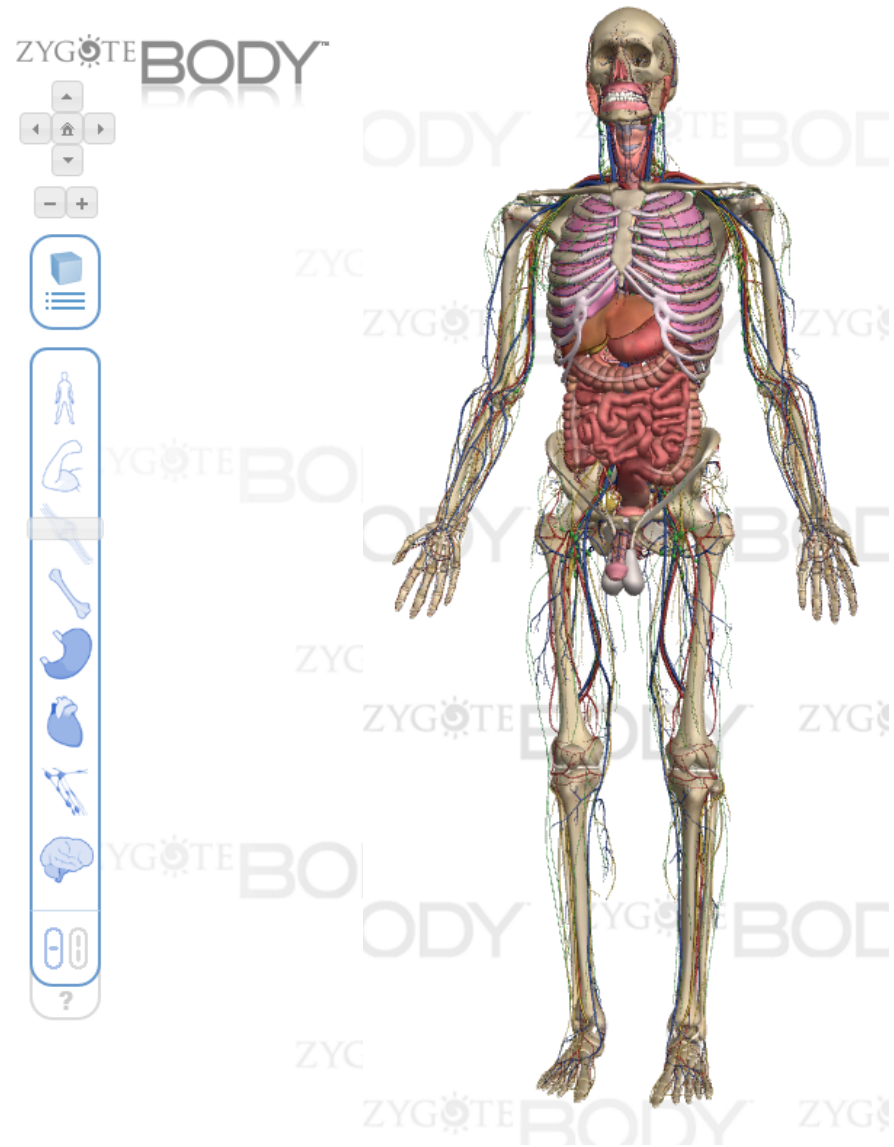
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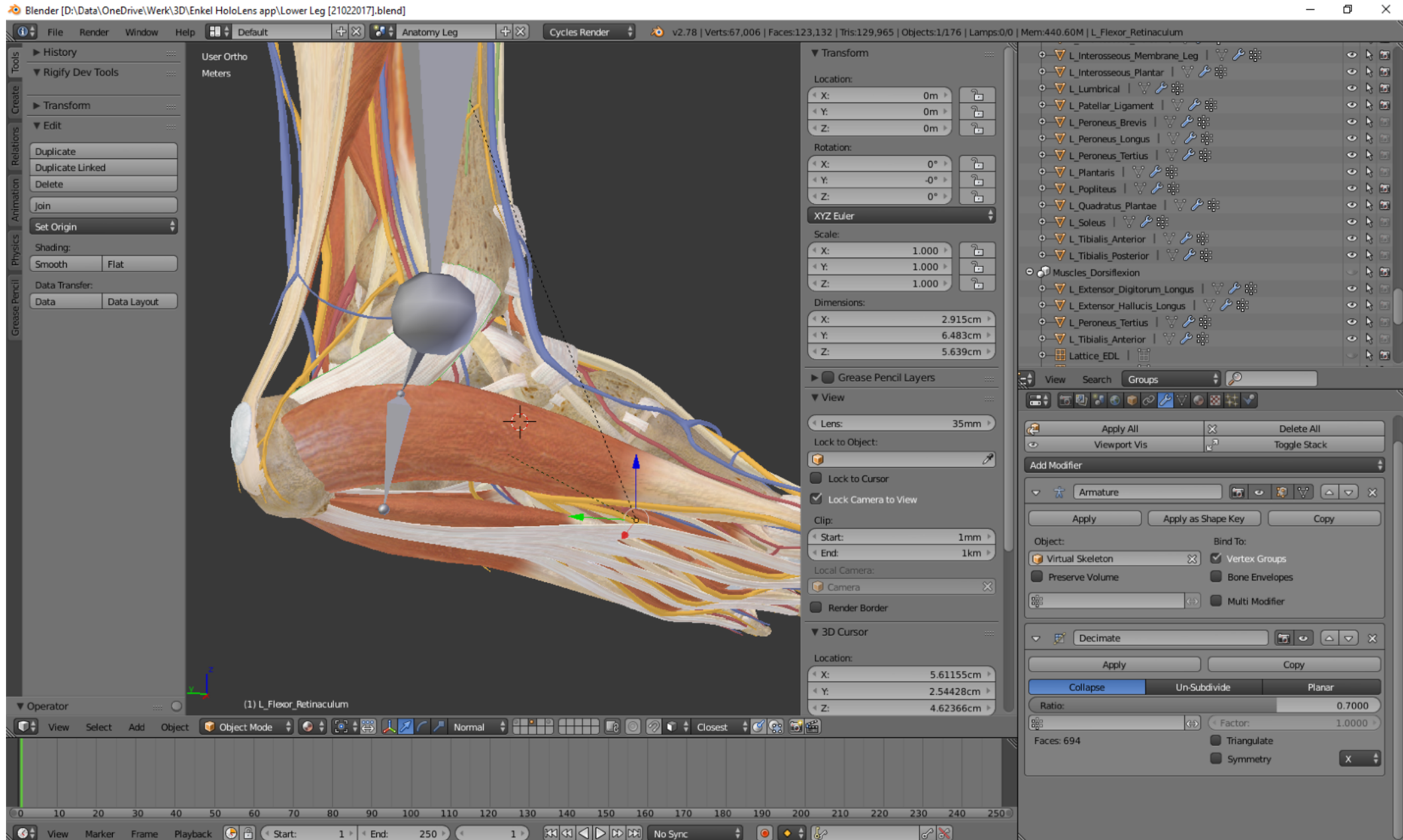
Talocalcaneal/subtalar joint



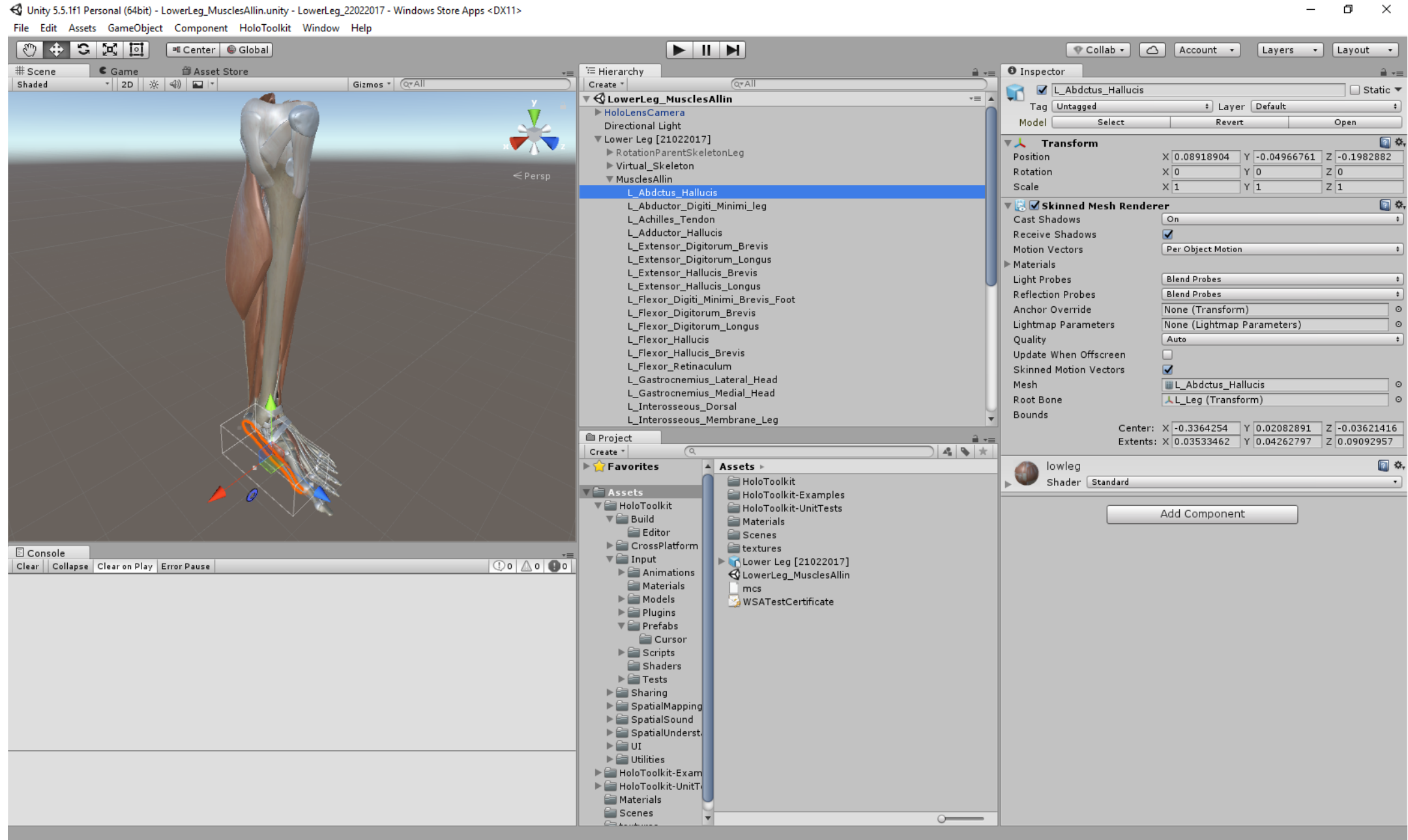
Workflow – Zygote model



Workflow – 3D editing Blender



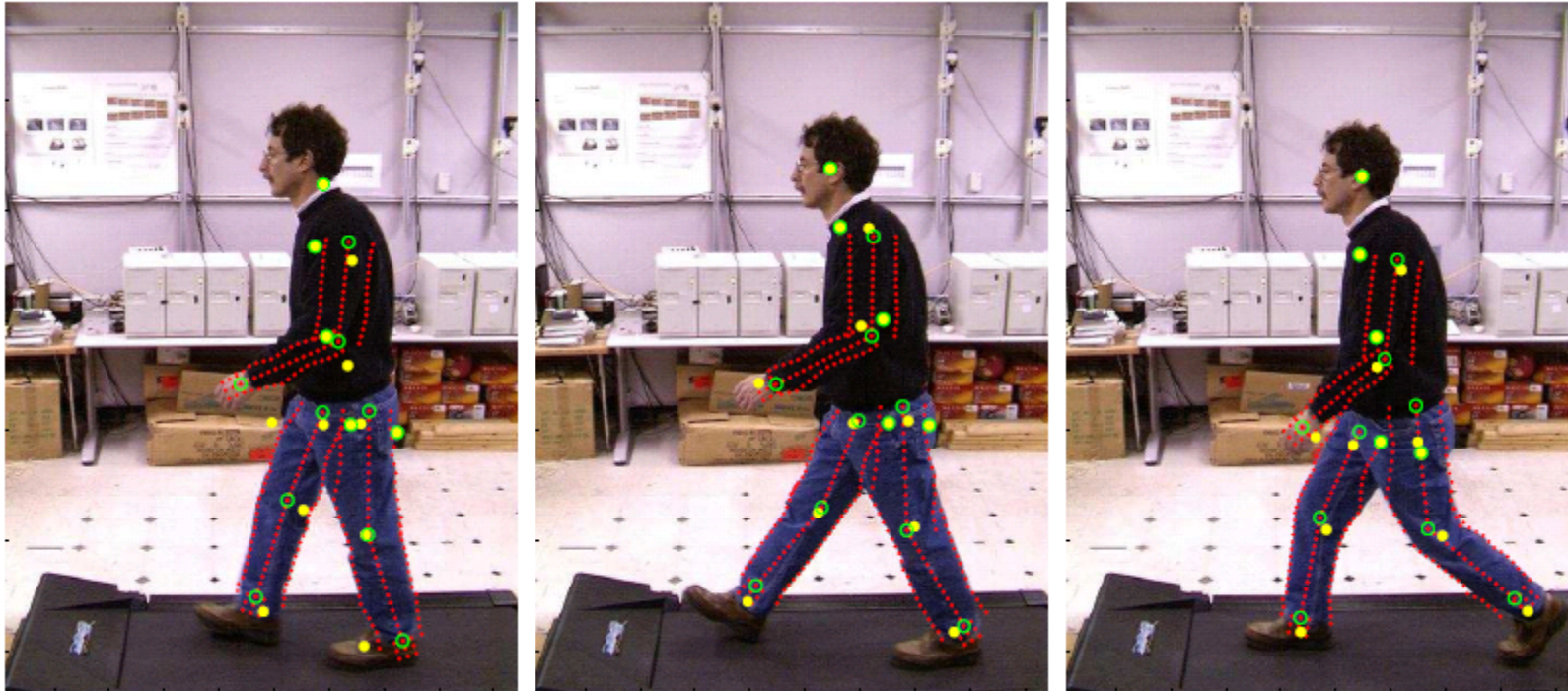
Workflow – Interaction Unity-3D/C#



Workflow – Deploying app Visual Studio



Challenges – Ankle as interface

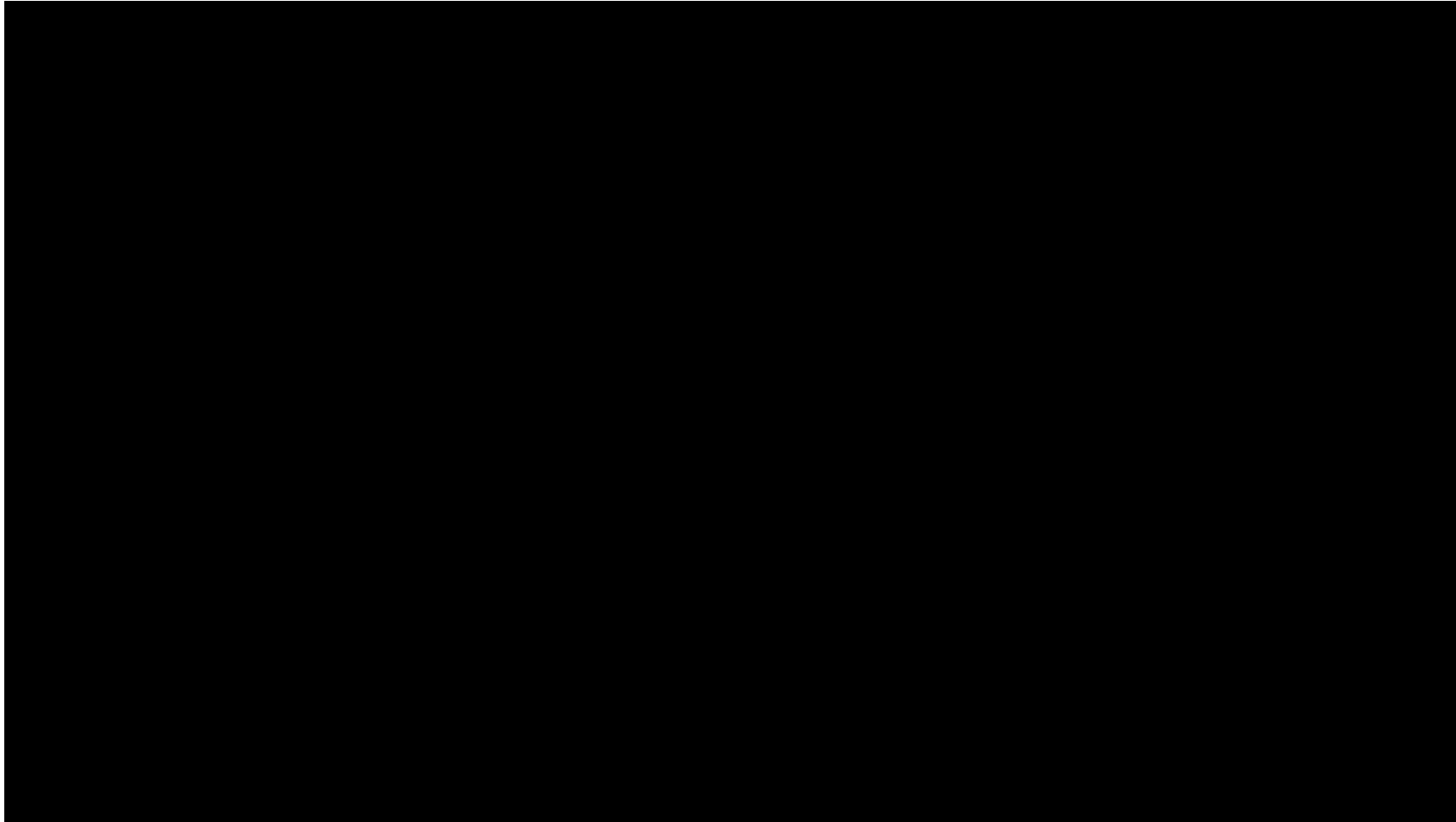


THE LEARNING EXPERIENCE

Stories for education



Gaming and stories for education



New Media Learning experiences

Multimedia

Making use of video, audio, book, VR and AR

Human Centered

Clear target audience

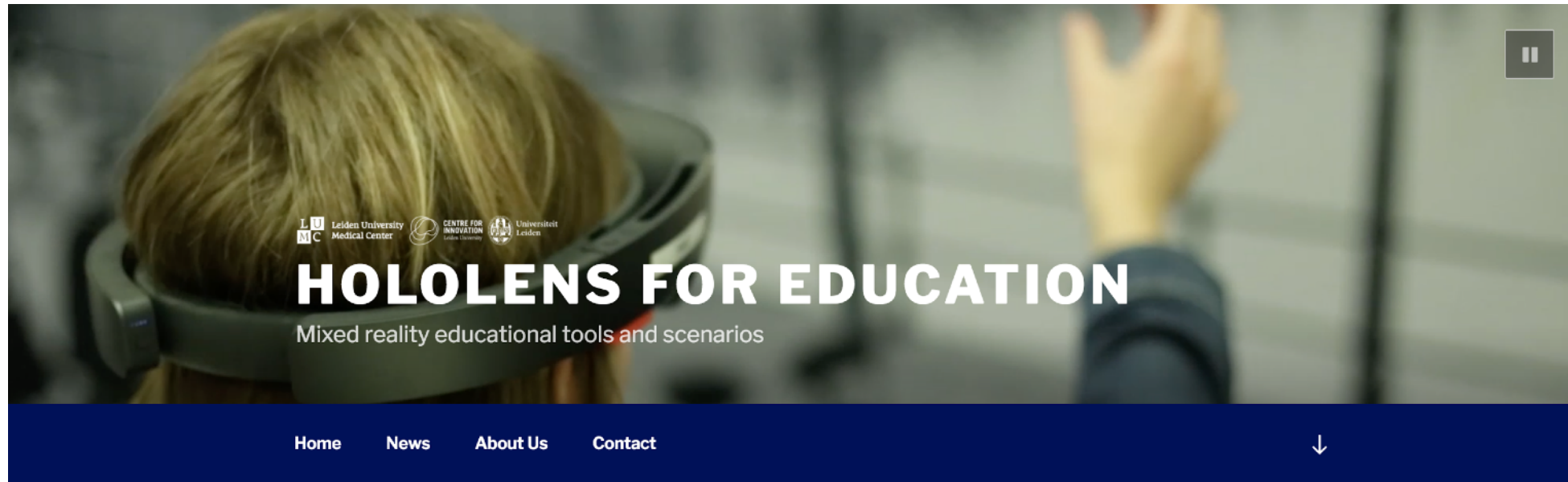
Goal oriented

Clear learning goals

How do we get young Marco to play football again?



Mixed Reality Expertise Lab



HOME

HoloLens for Education is a project by Leiden University and the Leiden University Medical Center (LUMC) that explores the possibilities of using the Microsoft HoloLens within higher (medical) education. This website aims to share the details of the experiment, display results and connect with others in the domain of mixed reality for education.

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