MOTION CAPTURE

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INTRODUCTION

Motion capture, or mo-cap, refers to the process of **recording** the **movement** of objects or people.

It's a technique that's been around for a few decades but has seen tremendous advancements in recent years.

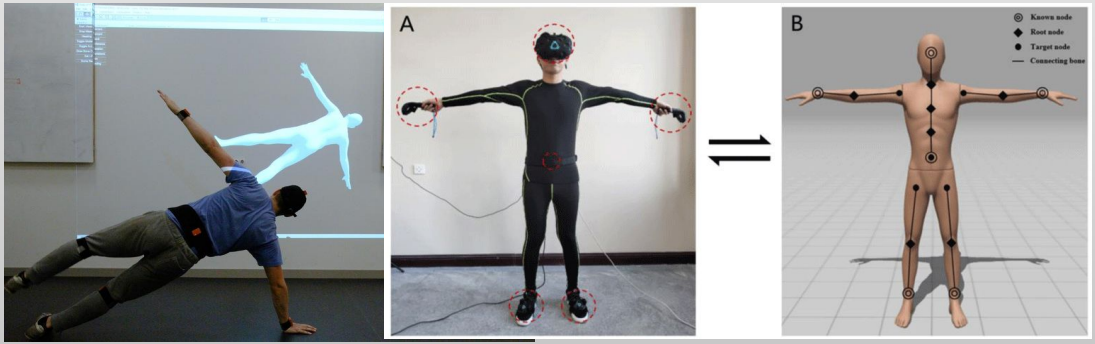



TECHNOLOGIES USED IN MOTION CAPTURE (1/2)

Optical Motion Capture:

- The most widely used.
- reflective markers are placed on the body
- infrared cameras capture the movement.

TECHNOLOGIES USED IN MOTION CAPTURE (2/2)



Inertial Motion Capture:

- inertial measurement units (IMUs) placed on the body
- accelerometers, gyroscopes, ...

Markerless Motion Capture:

- newer technology
- computer vision and machine techniques to track movement
- depth-sensing cameras or regular video cameras.

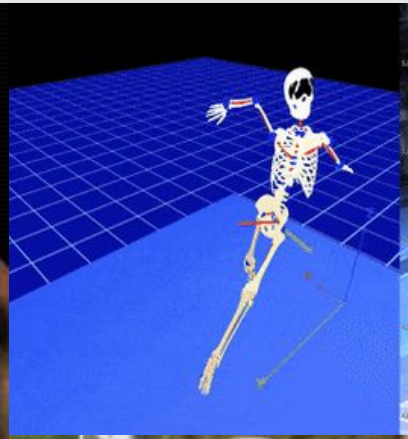
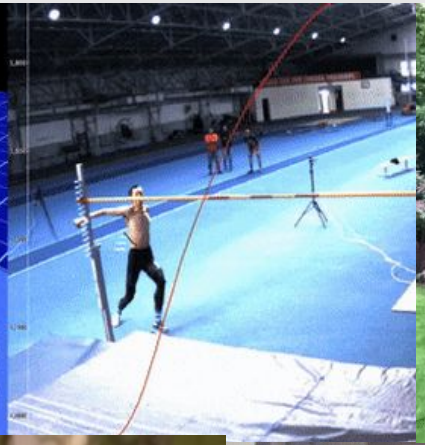
Entertainment

Healthcare

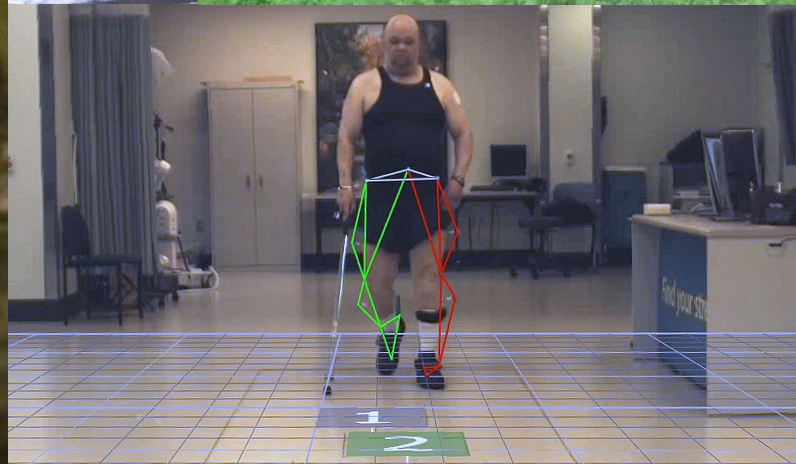
APPLICATIONS

Sports & Biomechanics

VR & AR





STATE OF THE ART IN MOTION CAPTURE (1/2)

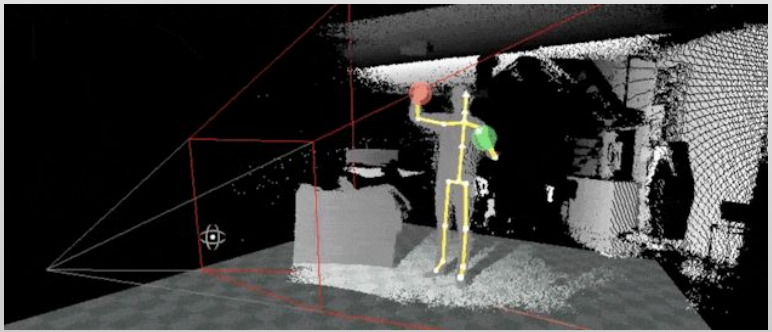
Real-time Processing:

- live performances, VR experiences, and interactive applications
- powerful computing and sophisticated algorithms to ensure low latency and high accuracy

Deep Learning and AI:

- improving the accuracy of movement tracking
- reducing the need for extensive calibration and setup

STATE OF THE ART IN MOTION CAPTURE (2/2)

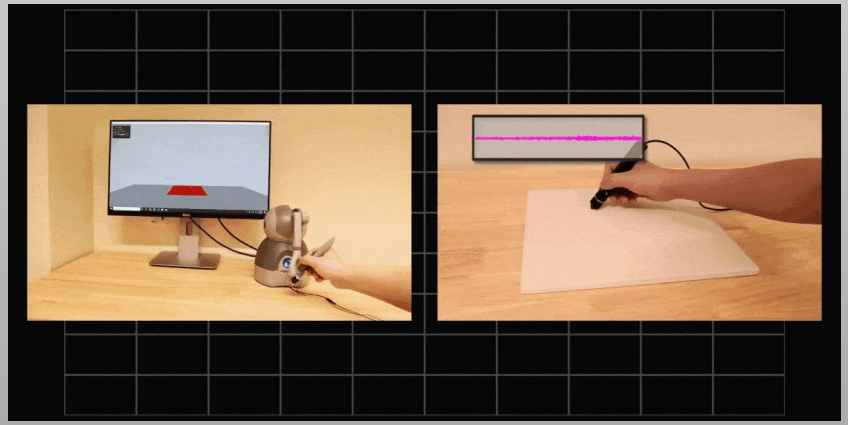


Accessibility and Cost:

- motion capture systems are becoming more affordable and accessible
- ex. Microsoft Kinect

Integration with Other Technologies:

- integrated with other technologies like haptic feedback, creating more immersive and interactive experiences
- ex. combining motion capture with haptic suits

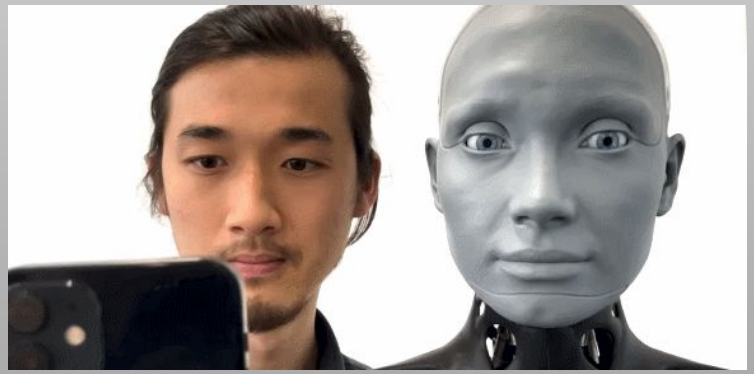


CONCLUSION

Motion capture is a versatile and powerful technology with applications spanning entertainment, sports, healthcare, and beyond.

The advancements in this field, particularly in real-time processing and **AI**, are pushing the boundaries of what's possible, making it an exciting area to watch.

As we continue to innovate and refine these technologies, the potential for motion capture will only grow, leading to even more groundbreaking applications in the **future**.



THANK YOU FOR YOUR ATTENTION 🙂

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