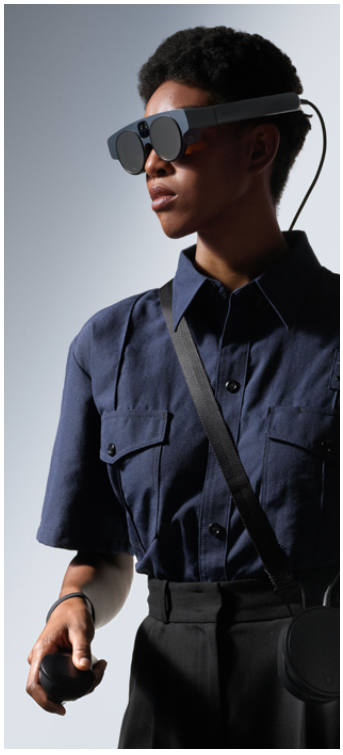
Augmented Reality 101: What is AR and how does it work?



What is augmented reality?

“Augmented” reality (AR) is an everyday reality that has been augmented or enhanced by the addition of digital visual information. The image you see in AR is exactly what you see in the real world using your eyes, but with images and text overlaid within your field of view via a wearable device. AR is different from “virtual” reality (VR), in which the user is fully immersed in a digital experience with the headset blocking out the external world completely.

How does AR work?

AR works by analyzing the environment and using triggers around you to display relevant information in the applicable place in your field of view. So, for example, an AR function for a map application might be programmed to detect the logos of specific stores and display details such as store hours when you look at them.

Magic Leap

The use of AR in medicine and surgery

AR allows doctors to plan for complex surgical cases. In fact, AR is already being used in practical applications, as well as cutting-edge medical scenarios. In October 2020, surgeons at UC Davis Children's Hospital in Sacramento, CA, used Magic Leap technology to prepare for the separation of twin babies who were joined at the head.

This rare and intricate surgery[1] was planned by building a 3D reconstruction of the conjoined twins from MRI and CT scans, which were then viewed on the Magic Leap platform using Brainlab's Mixed Reality Viewer software. The surgical team was then able to walk around the models to view all possible angles before a single incision was made.

The use of AR in manufacturing

AR allows manufacturing problems to be tackled remotely. Linear motion company PBC Linear is one of the many organizations using AR to capture and leverage machine instructions from seasoned employees and train new machine operators, resulting in an 80% reduction in training time and 20% in annual savings due to less scrap and fewer mistakes[2]—ensuring quality parts get to customers on time.

What is the future of AR?

A March 2021 study by Statista[3] estimated there will be 2.4 billion mobile AR users worldwide by 2023. Ownership of dedicated AR devices such as Magic Leap is expected to reach 30 million units by 2023, an increase of over 380% from 2020.

For information about Magic Leap 2, the most immersive AR platform for enterprise, visit magicleap.com.

Visit magicleap.com/news for the latest discussions about Magic Leap and augmented reality. For information about Magic Leap 2, the most technically advanced and immersive AR platform for enterprise, visit magicleap.com

1. https://health.ucdavis.edu/children/conjoined-twins/
2. https://www.magicleap.com/manufacturing-webinar-12022021
3. https://www.statista.com/statistics/1098630/global-mobile-augmented-reality-ar-users/

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