

Extended Reality coupled with Artificial Intelligence to Leverage better Transformation - Munfarid Global

Mixed Reality can help reduce the cognitive load on the brain by allowing learners to visualize, manipulate, and interact with complex structures

DUBAI, UNITED ARAB EMIRATES, September 28, 2019 / EINPresswire.com/ -- Extended Reality has improved outcomes for patients by merging physical and virtual worlds and advancing beyond 2D screens so as organ anatomy can be understood and grasped non-invasively. AR, VR, XR and MR has greatly eased preprocedural planning, visualization during a medical procedure and arranging rehabilitation methods in post-trauma (medical and physical)



patients. XR will explode into the public consciousness by the year 2020 as this convergence of AR, VR and MR is accelerating the potential to create new environments and the outcome is readily taking personalizations and customizations to a new level.

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VR provides a healthy distraction. An immersive virtual environment is like a virtual meditation, which can readily treat patients who are suffering from PTSD to Schizophrenia" Dr. Sana Farid Evolution of Extended Reality from other immersive technologies

Extended Reality is an umbrella term for all immersive technologies i.e. Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (MR). Virtual reality grants complete control over the individual's visual and auditory experience as they interact within an entirely synthetic environment, whereas augmented reality or AR allows the individual to perceive and comprehend to their original environment while installing 2D or 3D images within it.

On the other hand, Merged Reality allows for interaction

with digital objects while safeguarding the sense of existence within the true physical environment. These technologies make up the entire spectrum of XR or Extended Reality, which is transforming the surgical practice in healthcare. The scope and growth of AR, MR and VR are only limited to imagination.

Statistical Growth of XR in the Middle East and the world According to MarketWatch, the AR and VR Healthcare market is expected to reach at least USD 6141.78 million by the year 2025. The AR and VR healthcare market was previously valued at 7 Million USD in the year 2017. Viable adoption and increasing investments in the VR (Healthcare) field are the major driving factors of this promising tech. Applications in diagnostic imaging, surgical simulation, rehabilitation and health management, and patient care are empowering the wide domination of AR and VR in the Middle East.

"Mixed Reality technology is amazing but is it really useful to educators? Does it actually influence learning outcomes, and if so, how?"

What might seem futuristic is really here today in the Middle East. XR has provided more reasonable than any type of digital experience AR, VR and MR were able to create previously. VR surgical simulation has slowly being accepted by the conservative world of healthcare.

Psychiatrists use VRET or Virtual Reality Exposure Therapy in order to treat anxiety disorders like PTSD or post-traumatic stress disorder along with different phobias. In addition to this, according to ABC News, researchers at Cedars-Sinai Medical Center have claimed to have found VR environments effective way of offering patients progressive relief from any pain.

According to Statnews, doctors are using AR and VR games to train their surgical training. More, a report analysed by WHO or World Health Organization, claims the urgency in taking swift action to improve assessment, training, and coordination of surgical teams, in order to reduce the complexity of challenges in the medical technologies.

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The fusion of AR, VR, and XR for collaborative benefits in Healthcare

Dr Crossley who is Vanderbilt University electrophysiologist who is at present using a 3-D simulator that incorporates extended reality (XR) technology comments: "It lets us get the trainee to a much higher level, using a simulator, than we could in a hundred cases with a live patient." In his practical experience of using a 3D simulator, Crossley was convinced that it XR can easily revolutionize cardiologist training. The pragmatic power of Extended Reality easily integrates the real and virtual environments generated by technology and wearables like the VRXOne.

Understandably, the potential of Extended Reality, goes beyond just revolutionizing cardiology, pathology and radiology, as it can reduce the mental trauma of patients who are suffering from cancer and other mentally threatening diseases that require consistent support and daily control. XR can help them gain their brain space back so they can move on with their lives. More, importing CT or MRI scans of a patient into an XR simulator would allow doctors to approach a surgical procedure on a pre-designed virtual replica of the patient's anatomy i.e. before performing the actual procedure thus reducing unfortunate yet potential errors.

AR has already made its way into hospitals. The Accuvein scanner projects where veins and valves are so that healthcare professionals can easily locate a patient's vein when doing IV placements.

View of XR from a more simpler perspective

The future where there will be no need to distinguish between the unique features of AR, VR, and MR is already here with XR into a bigger picture. Why? XR is a connective technology that facilitates creative storytelling in short, it makes us understand how we individually would interpret and react to content. Based on a variety of factors, any individual would receive a personalized or a customized experience designed specifically for him/her down to their neurological level.

Factual estimation of an AR, VR and XR prevalent future-What the leaders say? Dr Sana Farid, founder of <u>Munfarid</u> Global quotes on the evolution of immersive technologies into more dramatically profitable and promising tech: "Virtual Reality is not restricted to creating an immersive entertainment experience only, as it has an effective, better and advanced value proposition for the healthcare industry waiting to be explored. Revolutionary development in healthcare awaits as wide-spread adoption of XR like for applications like pain management, rehabilitation, and mental health treatments, can significantly synthesize the aggressively evolving healthcare industry by big measures. Best of all, the downsizing budget in surgical procedures and training can bring the much-needed transformation in healthcare."

More, Hiba Khan, Head of Technology, Munfarid in a recent interview mentions: "Virtual Reality is a promising field which is well-equipped in breaking the shackles of the existing modes of information. It has a compelling advantage of keeping any individual fascinated through rich real-time simulations further allowing them to feel its immersive benefits. The head-turning technology has arrested the audience with its real-time results in both healthcare and training industries. Its outcomes are only restricted to the imagination."

In support of the ongoing technological revolution going on in the Middle East, Ruler of Dubai, and Prime Minister of the UAE, His Highness Sheikh Mohammed bin Rashid Al Maktoum says: "Investment in long term innovation and support UAE national innovators are a key pillar for the work of future government, with a key objective is to make innovation culture and a way of life." according to Emirates247.

"Humans are essentially programmed to learn best through experience, and that is just what immersive technologies enable."

Frontiers in General Surgery Conference 2019

In a recent conference with top surgeons during the recently concluded Frontiers in the Surgery, Dr Sana Farid continued to mention her inspiring and innovative remarks on XR. She continues to say: "VR provides a healthy distraction. An immersive virtual environment is like a virtual meditation, which can readily treat patients who are suffering from PTSD to Schizophrenia. They can practice social interactions in a safe setting, and allow people who are suffering from chronic depression to escape into pleasing settings."

Mr. Azan Sharif, a leading surgeon present at the conference added: "Opportunities to tip the scales in life and death situations are several in healthcare. Innovations in this field can benefit all of us as fortunately, VR is revolutionizing the industry in ways that can create more innovative treatment options, skilled physicians, and improvise patient care." The conference with decisions to be taken to support the healthcare industry of the Middle East with more progressive and innovative solutions extracted from the full-scale benefits of XR.

Dr Sana Farid was also the part of Artificial Intelligence Week Middle East, where pioneers of Al industry were present. Her vision was extensively acknowledged as she explained how easily XR if optimized, can serve a variety of purposes like research and development, product design, manufacturing, training and knowledge, visualization & modeling, and definitely healthcare.

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