

What I learned about

AUGMENTED REALITY

Augmented reality (AR) is one of the biggest technology trends right now, and it's only going to get bigger as AR ready smartphones and other devices become more accessible around the world. AR let us see the real-life environment right in front of us—trees swaying in the park, dogs chasing balls, kids playing soccer—with a digital augmentation overlaid on it. For example, a pterodactyl might be seen landing in the trees, the dogs could be mingling with their cartoon counterparts, and the kids could be seen kicking past an alien spacecraft on their way to score a goal.

There are as many uses for AR in our everyday lives:

- Enhanced navigation systems use augmented reality to superimpose a route over the live view of the road.
- During football games, broadcasters use AR to draw lines on the field to illustrate and analyze plays.
- Furniture and housewares giant IKEA offers an AR app (called IKEA Place) that lets you see how a piece of furniture will look and fit in your space.
- Military fighter pilots see an AR projection of their altitude, speed, and other data on their helmet visor, which means they don't need to waste focus by glancing down to see them.

What is AR?

An experience that utilizes a camera to change or enhance something in the user's real world. This augmented reality experience can be appbased or web-based, though app based is more common today.

Note: Although the term uses the word "reality", the experience does not need to look realistic. Ads within AR can be presented in two ways: through the use of markers (such as a QR code) or by placing a brand object in the immediate real-world environment using the device camera

The physical environment in which computer-generated images are being inserted. Context is critically important to an AR experience.

The primary value of augmented reality is the manner in which components of the digital world blend into a person's perception of the real world, not as a simple display of data, but through the integration of immersive sensations, which are perceived as natural parts of an environment.

Augmented reality is used to enhance natural environments or situations and offer perceptually enriched experiences. With the help of advanced AR technologies (e.g. adding Computer vision, incorporating AR cameras into smartphone applications and object orientation) the information about the surrounding real world of the user becomes interactive and digitally manipulated. Information about the environment and its objects is overlaid on the real world. This information can be virtual. Augmented Reality is any experience which is artificial and which adds to the already existing reality or real, e.g. seeing other real sensed or measured information such as electromagnetic radio waves overlaid in exact alignment with where they actually are in space. Augmented reality also has a lot of potential in the gathering and sharing of tacit knowledge. Augmentation techniques are typically performed in real time and in semantic contexts with environmental elements. Immersive perceptual information is sometimes combined with supplemental information like scores over a live video feed of a sporting event. This combines the benefits of both augmented reality technology and heads up display technology (HUD).

Types of Augmented Reality apps

- **Augmented Reality viewer app**
An AR app such as Layar or Aurasma that is designed to provide Augmented Reality viewing experiences across multiple brands and content types.
- **Custom Campaign App**
An AR App with 1 to 5 experiences that is published and available through the Apple App Store and/or Google Play.
- **Custom Event App**
An AR App with 1 to 5 experiences, used for a tradeshow or live event that is distributed to dedicated event iPads. Event apps are not available on the Apple App Store or Google Play. Event Apps typically have a life span of 3 to 6 months.
- **Custom App vs. Universal App**
A custom app is client branded and developed and licensed for use by one client. A universal app is a vendor branded app (i.e. Aurasma or Layar) that uses a single, universal App to view all clients' AR experiences. Marxent is a custom app Augmented Reality vendor.

Augmented Reality platforms & technologies

- Qualcomm® Vuforia™

Vuforia is a software platform that uses top-notch, consistent, and technically resourceful computer vision-based image recognition and offers a wide set of features and capabilities. Marxent is a Qualcomm Vuforia preferred vendor.

- Unity 3D

Unity 3D is a cross platform game engine developed by Unity Technologies. It is used to develop video games for web plugins, desktop platforms, consoles and mobile devices. Marxent uses Unity 3D to implement 3D models within Augmented Reality apps.

- VisualCommerce® (V-Commerce)

The 'unlimited AR' platform for hosted, downloadable content. Visual Commerce apps are typically developed as a sales support tool, virtual product trial, with the option to purchase. The V-Commerce™ platform is intended for AR apps that will be expanded on over time, adding new content or experiences.