

# AUGMENTED REALITY

“Simply put, we believe augmented reality is going to change the way we use technology forever. We’re already seeing things that will transform the way you work, play, connect and learn.”

—Tim Cook

Augmented reality is the integration of digital information with the user’s environment in real time. Unlike virtual reality, which creates a totally artificial environment, augmented reality uses the existing environment and overlays new information on top of it.

Boeing researcher, Thomas Caudell coined the term augmented reality in 1990, to describe how the head-mounted displays that electricians used when assembling complicated wiring harnesses worked. One of the first commercial applications of the AR Technology was the yellow “first down” line that began appearing in televised football games in 1990. Today Google glass and heads-up displays in car windshields are perhaps the most well-known consumer AR products, but the technology is used in many industries including health care, public safety, gas and oil, tourism and marketing.

Augmented reality applications are written in special 3D programs that allow the developer to tie animations or contextual digital information in the computer program to an augmented reality “marker” in the real world. When a computing device’s AR app or browser plug-in receives digital information from a known marker, it begins to execute the marker’s code and layer the correct image or images.

AR applications from smartphones typically include global positioning system (GPS) to pinpoint the user’s location and its compass to detect device orientation. Sophisticated AR programs used by the military for training may include machine vision, object recognition and gesture recognition technologies.

By:  
Deepika Verma  
CSE  
II year