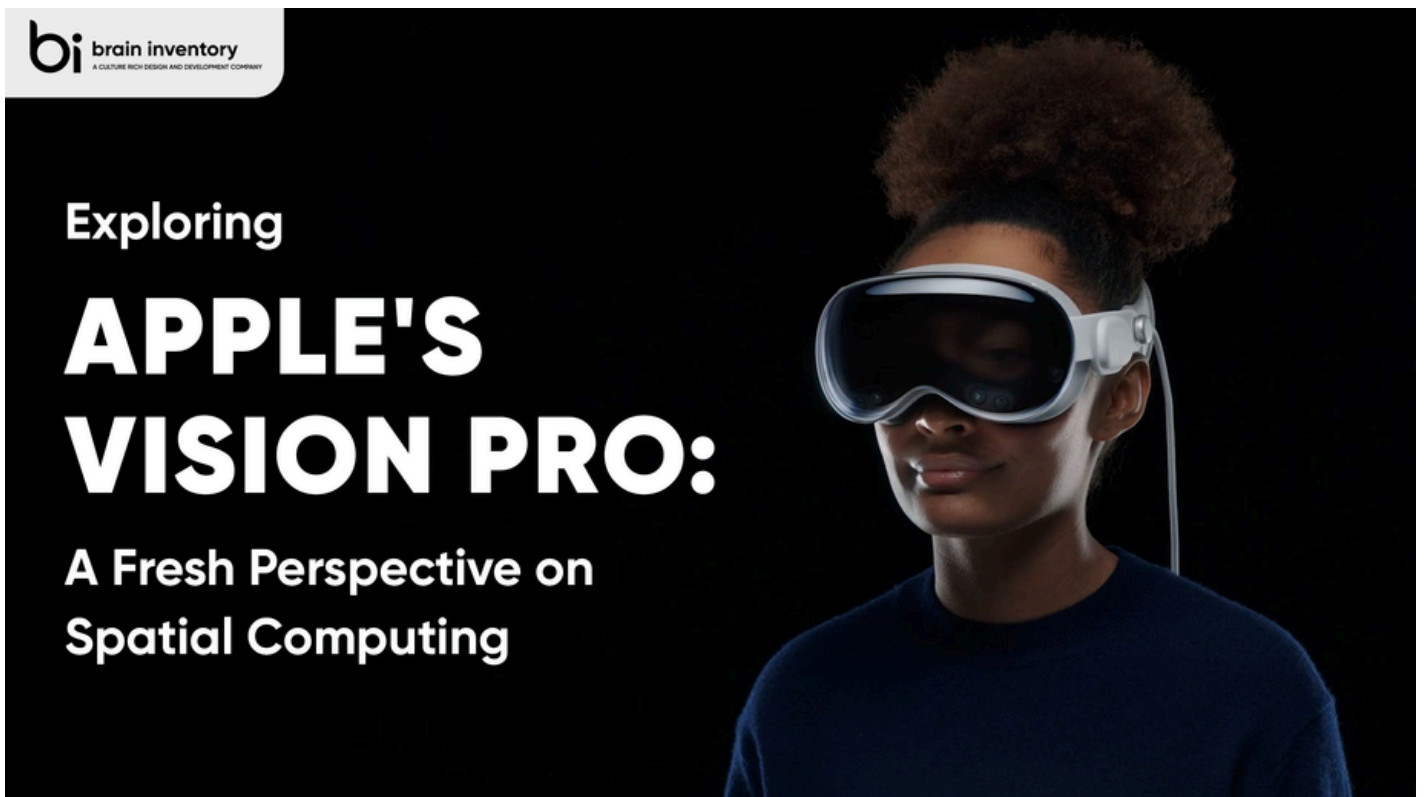




# Exploring Apple's Vision Pro: A Fresh Perspective on Spatial Computing



## Quick Summary

The new Apple Vision Pro is a revolutionary spatial computer that seamlessly blends digital content with the physical world. This blending of the digital and physical worlds allows users to stay present and connected to others in their daily lives. The system introduces a fully three-dimensional user interface controlled by the most natural and intuitive inputs possible — a user's eyes, hands, and voice.

## Introduction Apple Vision Pro

Groundbreaking technology—Vision OS is the world's first spatial operating system, enabling us to interact with digital content in real-time. To accomplish this feat — an ultra-high-resolution display that packs 23 million pixels across two displays, and custom Apple silicon in a unique dual-chip design — we needed to fully reinvent how we think about sensing and interacting with the world.

The Vision Pro is a headset with a bold design and big promises. It's easy to see the headset, with its \$3,499 price tag, showing up in high-end technology stores like Apple. With its

premium design, the Vision Pro deserves that kind of reputation.

Apple's new visionOS will massively reduce development time of applications and games within the AR ecosystem. RealityKit and Reality Composer Pro, in the meantime, will make it easier to design AR content for your existing or new AR application. The reality composer allows the creation of 3D objects via a series of growth steps that allow combining entire scenes using menus and social media templates. The Vision Pro is based upon Apple technology; one example shown was voice recognition being able to trigger the execution of code; another is full support for Apple's SwiftUI and Xcode.

The headset is made of a single piece of polished and anodized aluminum, much like the Apple Watch, with a leather-and-silicone strap. The first units will come in two sizes, one bigger than the other. An array of sensors including a gyroscope, an accelerometer, a magnetometer, and a barometer will provide orientation tracking and health monitoring. Display resolution is about twice that of the current Rift prototype shown to developers.



## **Extraordinary New Experiences**

Apple vision pro is a stunning technology that brings elements of augmented reality, 3D, advanced gesture controls, and a powerful new interface to personal computing.

**An infinite canvas for apps at work and at home:** Apple today introduced a new version of its popular Pro app -- Apple Vision Pro. The

update brings several improvements that users will appreciate. To begin with, the updated program features a three-dimensional interface that frees apps from the boundaries of the display so they can appear side by side at any size. Apple says that this feature makes it easier to multitask and use more apps simultaneously. The update has been designed with professionals in mind and, as such, supports dual monitors.

**Engaging entertainment experiences:** Apple Vision Pro is the most advanced entertainment system Apple has ever created. It's built to deliver an authentic and intensely immersive viewing experience, with two ultra-high-resolution displays (4K monitors for a combined total resolution of 32 million pixels) that provide a 100-foot wide screen and advanced Spatial Audio. Users can watch movies and TV shows, or enjoy stunning three-dimensional movies. And Apple Immersive Video offers 180-degree high-resolution recordings with Spatial Audio, bringing them to entirely new places.

**Immersive Environments:** With Environments app brings the power of spatial augmented reality to iOS. With it, users can create virtual environments which they can then adjust in myriad ways. This enables a user's world to grow beyond the dimensions of a physical room with dynamic, beautiful landscapes that can help them focus or reduce clutter in busy spaces.

**Memories come alive:** Apple Vision Pro's unwavering commitment to the highest standards of image capture and processing, combined with decades of experience delivering consumer experiences, make Apple Vision Pro an exceptional choice for everyone from casual photographers to industry professionals. The result is an ever-expanding collection of photos and videos to enjoy anytime, anywhere – either on iPhone or Mac – all beautiful and accessible across Apple devices.

**FaceTime becomes spatial:** With Apple Vision Pro, FaceTime calls take advantage of the room around the user. To reflect real-world environments in FaceTime, we looked to see how people are communicating today — taking in the whole scene and interacting with everyone within it.

## **A Revolutionary Operating System and User Interface**

VisionOS is a revolutionary operating system that will take your computer to an all-new level that you've never seen before. Built from the ground up, this OS delivers powerful spatial computing experiences that can take advantage of the space around the user, unleashing new opportunities at

work and at home. Apple Vision Pro with EyeSight features a revolutionary innovation that helps users stay connected with those around them. When a person approaches someone wearing Vision Pro, the device feels transparent — letting the user see them while also displaying the user's eyes, providing a reassuring and welcoming experience. When a user is immersed in an environment or using an app, EyeSight gives visual cues to others about what the user is focused on.

### **What will Apple Vision Pro Bring to App Development?**

Apple Vision Pro is the new spatial computing platform that allows Apple to market its augmented reality glasses. The new platform is poised to change the way software developers, software testers, and cybersecurity experts create applications.

**For App Developers:** The release of iOS 11 has introduced a new Augmented Reality (AR) platform called Vision. With this new framework, Apple is opening up the world of AR to developers and designers across the globe. Paired with Xcode 9 beta, developers will have access to tools that enable them to build even better AR experiences for iOS devices. Vision places over 200 computer vision APIs at our disposal; helping developers quickly build AR experiences.

**For Cybersecurity Professionals:** Vision Pro is a new mobile app that was recently released for iOS devices. It allows users to perform eye-based facial recognition scans using their device's front camera. This type of authentication is often used by enthusiasts in the cybersecurity community for fun, but also by some enterprises to identify employees and gain access to secure areas. Personal use of this type of application has increased considerably since its introduction on Snapchat where it is used to prevent users from taking screenshots.

**For Software Testers:** Vision Pro was developed by Exploratory Testing Software. The software company provides the leading testing platform for QA teams to collaborate in real-time and produce more reliable apps. Vision Pro is changing the way developers and testers work together and is designed to improve the way quality assurance processes are conducted.

**For UI/UX Designers:** Vision Pro claims to be the world's most advanced authoring tool for creating spatial user interfaces. It facilitates the creation of applications with features supporting all of the senses, providing a much more natural and intuitive way to interact with computers. The San Diego-based software company that builds Vision, called Immersion

Corporation, thinks this new technology will change the way applications are developed in the future.

## **Apple Vision Pro: Pioneering a New Era of AR-VR Wearable Technology**

Apple has recently launched its AR Kit to introduce the world to virtual reality. Along with a number of patents, it has been suggested that the new technology will be incorporated into all of their new iPhone models. Some developers are already porting their apps to this exciting new development. There are many organizations that are researching how to make better use of this technology for building engaging experiences and systems.

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