

Article Overview

Eye tracking devices measure and analyze eye movements to understand attention, behavior, and enable control of devices through gaze.

Overview

Eye tracking devices are technologies that monitor and record eye movements, providing insights into visual attention, cognitive processes, and user behavior. They are widely used in research, gaming, VR/AR, medical diagnostics, and assistive technology. These devices can detect where a person is looking, how long they focus on specific areas, and even track head movements for more immersive experiences .

Types of Eye Tracking Devices

- o Screen-based trackers: These devices are placed near a computer or display and track eye movements relative to the screen. They are commonly used in research, marketing studies, and gaming .
- o Wearable or head-mounted trackers: Worn like glasses or headbands, these devices allow mobile tracking in real-world environments, useful for VR/AR, sports, and behavioral studies .
- o Webcam-based trackers: Utilize standard webcams for remote or accessible eye tracking, suitable for online studies and basic research .
- o Assistive communication devices: Specialized devices like the Tobii TD I-Series enable people with disabilities to control computers and communicate using eye gaze, supporting independence for conditions such as ALS or cerebral palsy .

Key Features and Applications

- o Gaming and VR/AR: Devices like Tobii Eye Tracker 5 enhance immersion by allowing users to interact with games using eye and head movements, compatible with glasses and multiple screen sizes .
- o Research and Behavioral Studies: Eye trackers help analyze visual attention, hand-eye coordination, and workflow efficiency, providing objective data for psychology, marketing, and human factors research .
- o Medical and Psychological Assessment: Eye tracking can assist in diagnosing neurological or psychological conditions, such as using platforms like Psilmi(TM) for mental health evaluation .
- o Accessibility and Communication: Eye tracking enables augmentative and alternative communication (AAC), allowing users to operate devices, control environments, and communicate effectively using gaze .

Technical Considerations

- o Accuracy and sample rate: Important for research and medical applications to ensure precise measurement of eye movements .
- o Compatibility: Many devices work with glasses and various screen types, while some are designed for

Eye-tracking device

mobile or VR environments .

o Human interface: Devices may be non-contact, head-mounted, or integrated into wearables, depending on the application and mobility requirements . Eye tracking technology continues to evolve, offering more accessible, accurate, and versatile solutions for research, gaming, healthcare, and assistive communication, transforming how we understand and interact with human behavior .

Compare eye tracking devices and technologies. Learn how different eye trackers work and explore RealEye's webcam-based

Eye-tracking technology offers various eye-tracker devices tailored to meet specific needs

In this article, we'll discuss gaze estimation (or eye tracking) technology, its prospects in different

What Is Eye Tracking? Eye tracking is a process for collecting data on a person's eye

Discover the top eye tracking hardware companies ranked by the number of academic publications. Explore leading

TD I-Series is a communication device that can be purchased with the world's leading eye tracker. Purpose

Eye tracking is a powerful and sophisticated tool that provides an objective glimpse into the cognition of healthcare

A special eye tracking camera mounted below the Eyegaze Edge screen observes one of the user's eyes.

An eye tracker is a device for measuring eye positions and eye movement. Eye trackers are used in

Screen-based trackers, wearable glasses, VR/XR headsets, and webcam-based eye

Our device works with almost any type of glasses and can track

The EyeLink 1000 Plus is the world's most precise and accurate video-based eye tracker, sampling

Find out the definition of eye tracking technology, how gaze tracking works, and eye tracking fields of use in research

Eye tracking technology is used to measure eye movement and pupil size, revealing gaze points and visual interest.



Eye-tracking device

Our eye trackers meet the high standards of research and seamlessly transition into real-world applications, delivering a

Neon is an eye tracking system designed to power scientific research and enable eye tracking applications beyond the possibilities of

Web: <https://www.kremgroup.co.za>

