

Computer Vision in Healthcare Market by Product (Processors, Software, Memory Devices, Services), Type (Smart Cameras), Application (Imaging, Surgeries, Hospital Management (Patient Provider Tracking, Scheduling)), End User & Region - Global Forecast to 2030

<https://marketpublishers.com/r/C51C3E6C7D35EN.html>

Date: May 2025

Pages: 278

Price: US\$ 4,950.00 (Single User License)

ID: C51C3E6C7D35EN

Abstracts

The global computer vision in healthcare market is projected to grow from USD 4.86 billion in 2025 to USD 14.39 billion by 2030, registering a 24.3% CAGR during the forecast period. Market growth is propelled by the convergence of technological innovation, growing healthcare demands, regulatory support, and the imperative for more efficient and effective healthcare solutions. Concerns regarding data privacy, security, and regulatory compliance pose significant barriers to the deployment of computer vision solutions in healthcare settings, which hinders market expansion throughout the forecast period.

Recent technological advancements, notably federated learning, which allows model training across decentralized healthcare data without sharing patient records, are overcoming privacy hurdles and accelerating algorithm development. The FDA's May 2024 draft guidance on AI/ML-enabled medical devices provides a clearer regulatory pathway, encouraging vendors to design for continuous learning and post-market performance monitoring. In parallel, the rise of edge-computing VPUs and 5G-enabled imaging devices is facilitating on-premises inference, reducing latency for time-critical applications such as surgical assistance.

Based on region, North America dominated the computer vision in healthcare market, driven by advanced healthcare infrastructure, a strong presence of technology and data-

driven healthcare organizations, and significant government support. Initiatives such as the FDA's January 2025 Draft Guidance on AI/ML-Enabled Device Software Functions and the National Institutes of Health (NIH)'s Artificial Intelligence program have accelerated the adoption of AI-powered imaging platforms by clarifying regulatory pathways and funding large-scale research projects. Adoption is also propelled by high US healthcare spending, widespread EHR infrastructure, and the imperative to reduce diagnostic turnaround times and improve patient outcomes.

Major players such as NVIDIA Corporation (US), Intel Corporation (US), Microsoft Corporation (US), Advanced Micro Devices, Inc. (US), and Google (US) are leveraging strategic partnerships. In April 2023, Microsoft (US) and Epic Systems Corporation (US) expanded their strategic partnership by integrating Azure OpenAI Service into Epic's electronic health record (EHR) platform. Leading institutions such as Mayo Clinic (US) and Cleveland Clinic (US) harness predictive analytics and computer vision for automating radiology workflows, stroke care, and real-time patient monitoring through dedicated AI centers and case-specific implementations. The North American market's leadership is thus consolidated through regulatory advancements, strategic industry collaborations, and deep IT integration in healthcare, positioning the region as the global frontrunner in computer vision in healthcare.

The dominant segment in the computer vision in healthcare market, based on product & service, is expected to be the software segment. This can be attributed to its critical role as the foundation for developing, deploying, and integrating advanced analytics and algorithms into clinical practice. As the demand for innovative healthcare solutions continues to grow, software-based computer vision technologies are poised to play an increasingly pivotal role in transforming patient care and driving improvements in healthcare delivery and outcomes.

The healthcare providers segment is anticipated to exhibit the highest growth rate in the computer vision in healthcare market. This growth is due to healthcare providers increasingly embracing AI and automation technologies to enhance patient care and streamline operational processes. Within this context, computer vision offers a suite of capabilities, including image analysis and pattern recognition, which are crucial for medical imaging interpretation and patient monitoring.

Furthermore, prospective growth opportunities for participants in the computer vision in healthcare market are anticipated in emerging Asian markets, notably China and India. The expansion in the APAC region is primarily propelled by factors such as increasing healthcare expenditure, rising chronic disease burden, advancements in healthcare IT,

improving access to healthcare services, growing research and development activities, and government support initiatives. As these trends continue, the adoption of computer vision technologies is expected to accelerate, driving further growth and innovation in the healthcare sector across the Asia Pacific region.

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