

# Vision Transformers Market by Offering (Solutions, Professional Services), Application (Image Segmentation, Object Detection, Image Captioning), Vertical (Media & Entertainment, Retail & eCommerce, Automotive) and Region - Global Forecast to 2028

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## Abstracts

The market size of the vision transformers market is projected to grow from USD 0.2 billion in 2023 to USD 1.2 billion by 2028 at a CAGR of 34.2% during the forecast period. The vision transformers market represents an exciting frontier in AI and computer vision, potentially transforming industries and improving image understanding and analysis.

“As per solution, the hardware segment holds the highest CAGR during the forecast period.”

The vision transformation market by solution bifurcates into hardware and software. During the forecast period, 2023-2028, the hardware segment holds the highest CAGR. Hardware plays a critical role in enabling the efficient execution of computationally intensive tasks related to computer vision. Hardware often includes specialized processing units, such as Graphics Processing Units (GPUs) and Tensor Processing Units (TPUs), which help accelerate the training and inference of deep learning models, including vision transformers. These processing units are optimized for handling large-scale matrix operations, making them essential for the high computational demands of vision transformers. Central Processing Units (CPUs) are also crucial hardware components, mainly for handling various tasks in the computer vision pipeline.

“As per vertical, the automotive vertical holds the highest CAGR during the forecast period.”

The verticals studied in the report are retail & e-commerce, automotive, government & defense, media & entertainment, healthcare & life sciences, and other verticals (education & agriculture). During the forecast period, 2023-2028, the automotive vertical segment holds the highest CAGR. The automotive vertical is experiencing a significant transformation by adopting vision transformers in the market. Vision transformers, a class of neural network architecture, play a pivotal role in enhancing vehicle perception, safety, and automation. Vision transformers are at the forefront of autonomous driving technology, enabling vehicles to perceive and interpret their surroundings. They process sensor data, including images from cameras, LiDAR, and radar, to make real-time driving decisions. Vision transformers are essential for ADAS features, such as adaptive cruise control, lane-keeping, automatic emergency braking, and parking assistance, enhancing vehicle safety.

“As per region, Europe holds the second-largest market share during the forecast period.”

The vision transformers market includes an analysis of five regions. Europe holds the second-largest market share in 2023 and will have similar dominance over the forecast period. Europe has diverse business needs, as several large retailers and manufacturing companies demand robust and scalable IT infrastructure solutions. The region has always been a challenging market for cloud providers due to the stringent regulations and security standards about user data privacy. Europe has been at the forefront of data protection regulations, particularly implementing the General Data Protection Regulation (GDPR). GDPR emphasizes the need for data privacy, security, and protection of individuals' data. The region has well-established providers of image sensors and image-processing algorithms, software for machine vision products designed for industrial applications. The automation level and the adoption rate of machine vision products are rapidly increasing, particularly in deep learning and neural networks, which have enabled machines to recognize and interpret images and video data with greater accuracy and speed.

The breakup of the profiles of the primary respondents is below:

By Company: Tier I: 30%, Tier II: 45%, and Tier III: 25%

By Designation: C-Level Executives: 50%, Director Level: 35%, and Others: 15%

By Region: North America: 50%, Asia Pacific: 15%, Europe: 30%, Rest of World: 5%

Note: Others include sales managers, marketing managers, and product managers

Note: The rest of the World consists of the Middle East & Africa, and Latin America

Note: Tier 1 companies have revenues of more than USD 100 million; tier 2 companies' revenue ranges from USD 10 million to USD 100 million; and tier 3 companies' revenue is less than 10 million

Source: Secondary Literature, Expert Interviews, and MarketsandMarkets Analysis

The key technology vendors in the market include Google (US), OpenAI (US), Meta (US), AWS (US), NVIDIA Corporation (US), LeewayHertz (US), Synopsys (US), Hugging Face (US), Microsoft (US), Qualcomm (US), Intel (US), Clarifai (US), Quadric (US), Viso.ai (Switzerland), Deci (Israel), and V7 Labs (UK). Most key players have adopted partnerships and product developments to cater to the demand for vision transformers.

Research coverage:

The market study covers the vision transformers market across segments. The study aims to estimate the market size and the growth potential of the vision transformers market across different market segments, including offering, application, verticals, and region analysis. It includes an in-depth competitive intelligence analysis of the key players in the market, company profiles, observations related to products, services, business offerings, recent developments, and key market strategies.

Reasons to buy this report:

The report provides insights on the following pointers:

Analysis of key drivers (Need for image recognition in the automotive industry, Transfer learning plays a crucial role in the adoption of ViTs, Technology advancements boost the demand for image recognition among CPG and retail companies, Growing impact of AI in machine vision, Attention mechanism drives the market growth), restraints (Concerns related to high computational intensity

and resource requirements, High installation cost of image recognition solutions, Data annotation and privacy concerns), opportunities (Increase in the demand for big data analytics, Integration of AI capabilities with image recognition solutions, Development of machine learning about vision technology) and challenges (Challenge related to large scale data requirements, Regulatory compliance challenge) influencing the growth of the vision transformers market.

**Product Development/Innovation:** Detailed insights on the latest technologies in the vision transformers market

**Market Development:** In-depth information about lucrative markets – the report analyses the vision transformers market across various regions.

**Market Diversification:** Comprehensive information about new products & services, recent developments, untapped geographies, and investments in the vision transformers market.

**Competitive Assessment:** Detailed assessment of growth strategies, market shares, and solution offerings of leading players. The critical technology vendors in the market include Google (US), OpenAI (US), Meta (US), AWS (US), and NVIDIA Corporation (US), among others, in the vision transformers market.

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\*Details on Business overview, Products/Solutions/Services offered, Recent developments, MnM view, Key strengths, Strategic choices made, and Weaknesses and Competitive threats might not be captured in case of unlisted companies.

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