Vector Search Acceleration Market is Forecasted to Reach a Value of US $4.11 Billion by 2029

The Business Research Company's Vector Search Acceleration Global Market Report 2025 – Market Size, Trends, And Forecast 2025-2034

The Business Research Company

LONDON, GREATER LONDON, UNITED KINGDOM, December 4, 2025 /EINPresswire.com/ -- What Is The Expected Cagr For The [Vector Search Acceleration Market](#) Through 2025?
The market size of vector search acceleration has seen a sharp rise in more recent years, expanding from $1.27 billion in 2024 to an anticipated $1.61 billion in 2025 with a compound annual growth rate (CAGR) of 26.9%. The historical growth can be traced back to a rise in the utilization of AI-directed search systems, growing importance for immediate data retrieval, escalation in enterprise data volumes, proliferation of analytics solutions based on the cloud, and an upsurge in the implementation of semantic search tools.

The market size for vector search acceleration is predicted to witness substantial growth in the years ahead, with projections indicating it will expand to $4.11 billion by 2029, boasting a compound annual growth rate (CAGR) of 26.5%. This growth during the forecast period is linked to several factors including the rising integration of generative AI with search platforms, the growing demand for low-latency vector databases, wider use of AI accelerators within data centers, increased investment into scalable vector infrastructure, and an enhanced focus on edge-based vector search optimisation. Key trends anticipated during the forecast period include technological breakthroughs in neural retrieval models, advances in vector compression and quantization techniques, creation of hybrid search architectures, increased research and development funds in AI-driven search acceleration, along with improvements in GPU and TPU optimization for vector workloads.

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What Are The Driving Factors Impacting The Vector Search Acceleration Market?

The anticipated boom in the vector search acceleration market is attributed to the increased use of AI-powered applications. These applications, powered by artificial intelligence technologies such as machine learning and natural language processing, offer automatic task execution, decision-making, and insights. Businesses aiming to automate procedures and make swift, data-centric choices are driving the increased utilization of AI-enabled applications. The vector search acceleration field stands to gain from this surge in using AI applications, as AI-driven tools necessitate the quick and efficient extraction of intricate, high-dimensional data. As reported by Eurostat Statistical Office of the European Union, a statistical institute based in Luxembourg, in 2024, 13.5% of EU firms with over ten staff incorporated AI technologies in their operations, showcasing a surge of 5.5% from an 8% figure in 2023. Consequently, the heightened usage of AI-powered applications is propelling the vector search acceleration market's growth.

Which Players Dominate The [Vector Search Acceleration Industry Landscape](#)?
Major players in the Vector Search Acceleration Global Market Report 2025 include:
• Amazon Web Services Inc.
• Google LLC
• Microsoft Corporation
• Meta Platforms Incorporated
• Alibaba Group Holding Limited
• International Business Machines Corporation (IBM)
• Intel Corporation
• Oracle Corporation
• NVIDIA Corporation
• Spotify

What Are Some Emerging Trends In The Vector Search Acceleration Market?
Key players in the vector search acceleration market are focusing their efforts on technological innovations such as vectorization to boost processing speed, enhance search precision, and streamline the management of large-scale data for AI-powered applications. Vectorization refers to the transformation of various forms of data, like text or images, into numeric vectors so that machines can effectively process, compare, and analyze them. For example, Dnotitia Inc., a South Korean firm specializing in vector database technology, released the VDPU IP core in September 2025. This is the first accelerator IP specifically created for vector databases. Its unique features include dedicated processing cores for approximate nearest neighbor (ANN) search, on-chip memory hierarchies that are fine-tuned for large-scale vector activities, and inherent support for different distance metrics. Even though this solution requires hardware integration and has a higher entry barrier compared to software-only solutions, it provides a considerable boost in query throughput and decreases latency for large generative AI systems and recommendation systems.

Global Vector Search Acceleration Market Segmentation By Type, Application, And Region
The vector search acceleration market covered in this report is segmented –
1) By Component: Hardware, Software, Services

2) By Deployment Mode: On-Premises, Cloud
3) By Application: Recommendation Systems, Image And Video Search, Natural Language Processing, Fraud Detection, Other Applications
4) By End-User: Banking, Financial Services, And Insurance (BFSI), Healthcare, Retail And E-Commerce, Information Technology (IT) And Telecommunications, Media And Entertainment, Other End-Users

Subsegments:
1) By Hardware: Central Processing Units, Graphics Processing Units, Field Programmable Gate Arrays, Storage Devices
2) By Software: Indexing Software, Query Optimization Tools, Data Management Systems, Vector Database Platforms, Integration Middleware, Performance Monitoring Tools
3) By Services: Implementation Services, Consulting Services, Training And Support Services, Maintenance And Upgradation Services, Managed Services, Customization Services

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Which Region Holds The Largest Market Share In The Vector Search Acceleration Market?
In the Vector Search Acceleration Global Market Report 2025, North America stood as the leading region for the specified year. Anticipations are for Asia-Pacific to outpace other regions in terms of growth during the forecast period. The comprehensive report encompasses all regions, including Asia-Pacific, Western Europe, Eastern Europe, North America, South America, the Middle East, and Africa.

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