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Machine Learning Chip Market Report by Technology (System-on-Chip (SoC), System-in-Package, Multi-chip Module, and Others), Chip Type (GPU, ASIC, FPGA, CPU, and Others), Industry Vertical (BFSI, IT and Telecom, Media and Advertising, Retail, Healthcare, Automotive, and Others), and Region 2024-2032

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Abstracts

The global machine learning chip market size reached US$ 9.7 Billion in 2023. Looking forward, IMARC Group expects the market to reach US$ 62.1 Billion by 2032, exhibiting a growth rate (CAGR) of 22.4% during 2024-2032. The rapid emergence of quantum computing, increasing demand for efficient systems to solve computational problems, and rising development of smart cities and smart homes represent some of the key factors driving the market.

Machine learning (ML) chip comprises artificial intelligence (AI) technology that that is designed to support deep learning-based applications. It involves various technologies, such as system-on-chip (SoC), multi-chip module, and system-in-package, and its hardware infrastructure includes computing, storing, and networking. It is installed in a system to enhance intellectual property cores and improve design and tool flows. It is cost-effective and assists in preventing errors in a workflow, and efficiently saves a huge amount of data. It offers high speed, increases efficiency, and consumes less energy as compared to larger transistors. Besides this, it aids in improving performance, power, optimization, and analytics. As a result, the ML chip is widely employed in the automotive, healthcare, retail, media and advertising, information technology (IT) and telecommunication, and banking, financial services, and insurance (BFSI) industries across the globe.

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Machine Learning Chip Market Trends:
At present, the rising trend of digitalization and expansion of the IT and telecommunication industry around the world represent one of the key factors supporting the growth of the market. In addition, the increasing number of cyber-attacks encourages businesses to utilize database management and fraud detection systems, which is propelling the growth of the market. Apart from this, the rising demand for ML chips due to the development of smart cities and smart homes across the globe is offering lucrative growth opportunities to industry investors. Moreover, the increasing emergence of quantum computing, along with the implementation of ML chips in robotics to reduce human intervention and errors around the world, is positively influencing the market. Besides this, the growing adoption of ML chips on account of the escalating demand for efficient systems to solve mathematical and computational problems is offering a positive market outlook. Additionally, the rising integration of big data analytics and cloud computing to provide enhanced services among numerous industries across the globe is contributing to the growth of the market. This, coupled with the increasing utilization of ML chips for real-time consumer behavior insights, is impelling the growth of the market. Furthermore, the rising preference toward GPUs from CPUs to perform several complex tasks in the gaming industry is strengthening the market growth.

Key Market Segmentation:
IMARC Group provides an analysis of the key trends in each sub-segment of the global machine learning chip market report, along with forecasts at the global, regional and country level from 2024-2032. Our report has categorized the market based on technology, chip type and industry vertical.

Technology Insights:

System-on-Chip (SoC)
System-in-Package
Multi-chip Module
Others

The report has provided a detailed breakup and analysis of the machine learning chip market based on the technology. This includes system-on-chip (SoC), system-in-package, multi-chip module, and others. According to the report, system-on-chip (SoC) represented the largest segment.

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Chip Type Insights:

GPU
ASIC
FPGA
CPU
Others

A detailed breakup and analysis of the machine learning chip market based on the chip type has also been provided in the report. This includes GPU, ASIC, FPGA, CPU, and others. According to the report, GPU accounted for the largest market share.

Industry Vertical Insights:

BFSI
IT and Telecom
Media and Advertising
Retail
Healthcare
Automotive
Others

A detailed breakup and analysis of the machine learning chip market based on the industry vertical has also been provided in the report. This includes BFSI, IT and telecom, media and advertising, retail, healthcare, automotive, and others. According to the report, BFSI accounted for the largest market share.

Regional Insights:

North America
United States
Canada
Asia-Pacific
China
Japan
India
South Korea
Australia
Indonesia

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Others
Europe
Germany
France
United Kingdom
Italy
Spain
Russia
Others
Latin America
Brazil
Mexico
Others
Middle East and Africa

The report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Europe (Germany, France, the United Kingdom, Italy, Spain, Russia, and others); Latin America (Brazil, Mexico, and others); and the Middle East and Africa. According to the report, North America (the United States and Canada) was the largest market for machine learning chip. Some of the factors driving the North America machine learning chip market included the growing concern about security of critical infrastructure, increasing demand for quantum computing, rising utilization in the IT industry, etc.

Competitive Landscape:
The report has also provided a comprehensive analysis of the competitive landscape in the global machine learning chip market. Competitive analysis such as market structure, market share by key players, player positioning, top winning strategies, competitive dashboard, and company evaluation quadrant has been covered in the report. Also, detailed profiles of all major companies have been provided. Some of the companies covered include Advanced Micro Devices Inc., Amazon Web Services Inc. (Amazon.com Inc.), Cerebras Inc., Google LLC, Graphcore, Intel Corporation, International Business Machines Corporation, NVIDIA Corporation, Qualcomm Incorporated, Samsung Electronics Co. Ltd., Taiwan Semiconductor Manufacturing Company Limited., etc. Kindly note that this only represents a partial list of companies, and the complete list has been provided in the report.

Key Questions Answered in This Report

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1. What was the size of the global machine learning chip market in 2023?
2. What is the expected growth rate of the global machine learning chip market during 2024-2032?
3. What are the key factors driving the global machine learning chip market?
4. What has been the impact of COVID-19 on the global machine learning chip market?
5. What is the breakup of the global machine learning chip market based on the technology?
6. What is the breakup of the global machine learning chip market based on the chip type?
7. What is the breakup of the global machine learning chip market based on the industry vertical?
8. What are the key regions in the global machine learning chip market?
9. Who are the key players/companies in the global machine learning chip market?

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