

Capitalizing on a 37.8% CAGR : Why the Deep Learning Market is a USD 406 Billion Megatrend by 2032

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/EINPresswire.com/ -- According to a new report published by Allied Market Research, titled, "[Deep Learning Market Size, Share, Competitive Landscape and Trend Analysis Report](#), by Component (Hardware, Software, Service), by Application (Image recognition, Signal recognition, Data mining, Others), by Industry Vertical (Security, Marketing, Automotive, Retail and E-Commerce, Healthcare, Manufacturing, Law, Others): Global Opportunity Analysis and Industry Forecast, 2022 - 2032."



Market Size : The global [deep learning market size](#) was valued at USD 16.9 billion in 2022, and is projected to reach USD 406 billion by 2032, growing at a CAGR of 37.8% from 2023 to 2032.

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Deep learning is a technology that directs computers to process data according to the human perspective. The models of deep learning can analyze complex patterns, texts, sounds, and other data to produce accurate insights and predictions. In addition, it is a subset of machine learning and artificial intelligence, that focuses on modeling and stimulating the behavior of human brain neural networks. In deep learning, large datasets are used to train artificial neural networks to carry out tasks without explicit programming. Furthermore, the technology is used in computer vision, speech recognition, natural language processing (NLP), and others. Moreover, various trends are associated with deep learning technology such as transfer learning (pre-trained models), generative adversarial networks (GANs), self-supervised learning and others. Using pre-trained models that have been optimized for tasks performed on the base of huge datasets is called transfer learning. With a smaller dataset, this strategy enhances performance while

accelerating training. In addition, the self-supervised model of deep learning helps in generating own information and codes from existing data without the requirement of large datasets. Furthermore, generative adversarial networks of deep learning technology are used for image generation, data augmentation, and realistic synthetic data creation for training. Therefore, these trends are driving the growth of the deep learning market.

Furthermore, the major market players adopted various strategies to increase the competition and offer enhanced services to their customers. For instance, in March 2023 Amazon Web Services, Inc. collaborated with NVIDIA Corporation to build world largest on-demand artificial intelligence infrastructure to train complex large language models (LLMs) and develop generative AI applications. This collaboration has the potential to drive the growth of deep-learning models. Moreover, in August 2021, IBM Corporation launched IBM Telum Processor. The processor is designed to deploy deep learning into enterprise workloads to address fraud in real time in the finance and insurance sector. The processor contains chip hardware that helps customers achieve business insights at scale across banking, finance, trading, insurance applications, and customer interactions. Therefore, such strategies foster deep learning market growth in the ICT sector.

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On the basis of application, image recognition holds the largest market share of the deep learning market in the year 2022. This is attributed to the growing demand for pattern recognition, optical character recognition, code recognition, facial recognition, object recognition, and digital image processing.

On the basis of region, North America dominated the deep learning market forecast in the year 2022, owing to the availability of high-performance graphics processing units (GPUs) and specialized hardware accelerators that boosts the development and deployment of deep learning models, enabling faster training and inference times. Further, high investments and the availability of settled IT infrastructure in the region boosts the growth of the market.

The pandemic has significantly pushed the demand for deep learning technology. This is mainly attributed to the rise in demand for anti-money laundering (AML), fraud detection solutions, and various other solutions. In addition, the COVID-19 epidemic has led to changes in model performance in contrast to static validation and testing approaches, which in turn drive the development of deep learning models, resulting in more continuous monitoring and validation required to mitigate various sorts of risk. Furthermore, the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA) have been implemented by various governments in response to the growing digital revolution, which is fueling market expansion. Therefore, COVID-19 had a positive impact on the deep learning industry.

Key Findings of the Study

By component, the software segment led the deep learning market size in terms of revenue in 2022.

By application, the image recognition segment led the deep learning market share in terms of revenue in 2022.

By region, North America generated the highest revenue in 2022.

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The key players profiled in the deep learning market analysis are Advanced Micro Devices Inc., Amazon Web Services, Inc., Google LLC, IBM Corporation, Intel Corporation, Microsoft Corporation, NVIDIA Corporation, Qualcomm Technologies Inc., Samsung and Xilinx. These players have adopted various strategies to increase their market penetration and strengthen their position in the deep learning industry.

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