

Artificial Neural Network Market Set For 19.9% Growth, Expected to Reaching \$1.4 Billion by 2032

The global artificial neural network market is set to grow due to increasing demand for AI solutions and the need for smarter business processes.

WILMINGTON, DE, UNITED STATES, November 28, 2024 / EINPresswire.com/ -- According to a new report published by Allied Market Research, The <u>artificial neural network market size</u> was valued at \$227.80 million in 2022, and is estimated to reach \$1.4 billion by 2032, growing at a CAGR of 19.9% from 2023 to 2032.



Neural networks are a series of algorithms that duplicate the operations and processes of a human brain to recognize relationships between vast amounts of data. A neural network is used in a variety of applications in financial services, from forecasting and marketing research to fraud detection and risk assessment. Rising unstructured data volumes and the impending need for analytics primarily drive the artificial neural network market growth. Moreover, innovative business offerings such as advanced facial recognition solution by neural network vendors play a significant role in its adoption.

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However, some of the restraints associated with its business attractiveness are higher testing-related issues during unit or system integration testing as compared to traditional system and the problems associated with handling complex system architecture which can limit the global market growth. However, these challenges are expected to have a limited impact on the artificial neural network market growth due to the emergence of deep learning technology citing the increased need for automation solutions. Overall, the artificial neural network market is expected to continue to grow due to the rise in the adoption of digital services across

enterprises.

Artificial Neural Networks (ANNs) fulfill a crucial function within the industrial context through the augmentation of efficiency and the enhancement of decision-making procedures. Within the realm of manufacturing, ANNs possess the capability to streamline production schedules, anticipate equipment failures, and refine quality control. Furthermore, in the context of predictive maintenance, these networks analyze sensor data to effectively anticipate potential issues, thereby minimizing periods of inactivity. ANNs also make notable contributions to the domain of supply chain management, optimizing both logistics and inventory management. The capacity of ANNs to absorb knowledge from data empowers industries to base their decisions on data-driven insights, leading to the advancement of operational efficiency and the attainment of cost reductions across the diverse spheres of industrial processes.

In 2022, the solution segment held the largest market share, accounting for nearly two-fifths of the artificial neural network market revenue, and is expected to retain its leadership position throughout the forecast period. This is driven by the growing demand for personalized solutions, prompting enterprises to increase investments in artificial neural networks. The services segment, however, is projected to experience the highest CAGR of 21.8% from 2023 to 2032, as these services reduce time and costs during initial system deployment.

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In terms of industry verticals, the healthcare segment led the market in 2022, contributing to less than two-fifths of the revenue, largely due to digital advancements in the IT sector. However, the manufacturing segment is expected to grow at the highest CAGR of 24.3% from 2023 to 2032, as automation trends and digital technology adoption in this sector create significant market opportunities.

Regarding deployment mode, the on-premise segment is forecast to experience the highest growth rate, driven by the need for secure and reliable internal data. Although more expensive than cloud-based solutions, on-premise options are favored for their reliability. However, the cloud segment is anticipated to grow the fastest, driven by its cost-effective solutions.

Regionally, North America experienced the highest growth in 2022, bolstered by key players like Oracle Corporation and IBM Corporation, along with government initiatives to improve database infrastructure. Asia-Pacific, however, is expected to be the fastest-growing region during the forecast period, due to the availability of affordable digital solutions, increasing data generation, and the adoption of advanced technologies that enhance system security and reduce operational delays.

The outbreak of COVID-19 is projected to provide a range of new avenues for the market to grow over the forthcoming period. These novel opportunities include a surge in integration for IoT,

artificial intelligence, and other advanced technologies coupled with the growing adoption of cloud solutions in several industrial operations. This entails businesses investing in artificial intelligence solutions for their organizations. Artificial intelligence solutions allow businesses to decode and understand the input in an intelligent system which is sometimes difficult for human beings to understand and allow industries to work digitally. This caused many businesses (both large and small) to invest in artificial intelligence to help increase their business continuation post the outbreak of the COVID-19 pandemic. Further, technology companies often deploy technologies like process automation and internet technology to continuously and rapidly provide improved efficiency and reduce network latency during the outburst of the COVID-19 crisis. Such instances are expected to support the growth of the artificial neural network market forecast period.

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The market players operating in the artificial neural network industry are Amazon Web Services Inc., Google Inc., Hewlett Packard Enterprise Development LP, IBM Corporation, Intel Corporation, Microsoft Corporation, NVIDIA Corporation, Oracle Corporation, Qualcomm Technologies Inc. and Salesforce Inc. These major players have adopted various key development strategies such as business expansion, new product launches, and partnerships, which help to drive the growth of the artificial neural network market globally.

The report provides a detailed analysis of these key players in the artificial neural network market. These players have adopted different strategies such as new product launches, collaborations, expansion, joint ventures, agreements, and others to increase their market share and maintain dominant shares in different countries. The report is valuable in highlighting business performance, operating segments, product portfolio, and strategic moves of market players to showcase the competitive scenario.

Competition Analysis:

Recent Product launches in the Artificial Neural Network Market

- 1. In April 2023, Google LLC launched a cloud-based automation toolkit for healthcare organizations and previewed Med-PaLM 2, a neural network capable of answering medical exam questions.
- 2. In August 2021, IBM Corporation unveiled details of the upcoming new IBM Telum Processor designed to bring deep learning inference to enterprise workloads to help address fraud in real-time.

Recent Partnerships in the Artificial Neural Network Market

- 1. In June 2023, Snowflake partnered with Microsoft to simplify joint customers' artificial intelligence projects. A core focus of the collaboration is Microsoft's Azure OpenAl Service. It provides cloud-based versions of OpenAl LP's machine learning models, including GPT-4.
- 2. In November 2021, Qualcomm Technologies partnered with Google Cloud, on Neural Architecture Search (NAS), enabling the companies to create and optimize AI models automatically rather than manually.

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