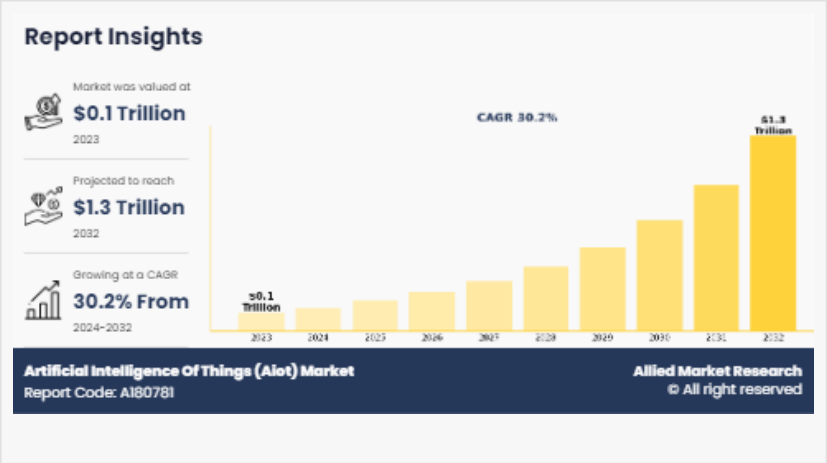
Artificial Intelligence of Things (AIoT) Market Research Report Highlights Major Trends and Opportunities

WILMINGTON, DE, UNITED STATES, July 18, 2024 /EINPresswire.com/ -- The artificial intelligence of things (aiot) market was valued at $126.1 billion in 2023, and is estimated to reach $1,319.4 billion by 2032, growing at a CAGR of 30.2% from 2024 to 2032.



The AIoT market is a rapidly growing sector that combines the power of artificial intelligence (AI) with the Internet of Things (IoT) technologies. This convergence enables devices connected to the internet to collect and analyze data, make decisions, and take actions without human intervention. AIoT solutions leverage machine learning algorithms, deep learning, natural language processing, and other AI technologies to enhance the capabilities of IoT devices and systems. In the AIoT market, devices such as sensors, cameras, actuators, and other connected devices gather vast amounts of data from the physical world. AI algorithms then process this data to extract valuable insights, predict outcomes, optimize processes, and automate tasks. This enables businesses to improve operational efficiency, enhance decision-making, and deliver personalized experiences to customers. Key applications of AIoT various industries, including manufacturing, healthcare, transportation, agriculture, smart cities, and more.

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In manufacturing, AIoT technologies optimize production processes, predict equipment failures, and enable predictive maintenance. In healthcare, AIoT solutions monitor patient health, streamline diagnostics, and improve treatment outcomes. Smart cities leverage AIoT to enhance urban services, manage resources efficiently, and ensure sustainability. The AIoT industry is driven by increase in adoption of IoT devices, growth in demand for intelligent automation, and the advancements in AI technologies. Companies are investing in AIoT solutions to gain a competitive edge, drive innovation, and meet evolving customer expectations. As the AIoT ecosystem continues to evolve, it presents significant opportunities for businesses to transform

their operations, create new revenue streams, and unlock the full potential of connected devices in the digital age.

On the basis of industry vertical, the manufacturing segment is expected to grow at the highest growth rate during the artificial intelligence of things market forecast period and as well as projected to be the fastest-growing segment during the forecast period, owing to its increasing adoption of automation, predictive maintenance, and smart manufacturing initiatives. AIoT applications in manufacturing utilize AI algorithms integrated with IoT devices to monitor equipment performance, predict maintenance needs, and optimize production processes in real-time, which is drives the segment growth in the AIoT market size.

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By region, North America attained the highest growth in 2023. This is attributed to the region's robust infrastructure, technological innovation, and substantial investments in AIoT initiatives. North America hosts a thriving ecosystem of AIoT companies, research institutions, and technology hubs, fostering a conducive environment for the development and adoption of AIoT solutions across diverse industries. However, Asia-Pacific is expected to exhibit the highest growth during the forecast period, owing to increase in digital transformation initiatives. With a growing emphasis on Industry 4.0, smart cities, and connected infrastructure projects, countries in the Asia-Pacific region are witnessing a surge in demand for AIoT solutions to address diverse challenges and capitalize on emerging opportunities, which further contribute to the growth of the global artificial intelligence of things (AIoT) market.

Technological Trends
The AIoT (Artificial Intelligence of Things) market is at the forefront of technological innovation, combining the power of artificial intelligence (AI) with the vast network of interconnected devices in the Internet of Things (IoT). One of the most significant trends in AIoT is the integration of AI capabilities directly into edge devices. Edge AI enables real-time data processing and analysis at the device level, reducing latency and enhancing decision-making capabilities without relying heavily on cloud resources. This trend is crucial for applications requiring low latency, such as autonomous vehicles, industrial automation, and smart cities. As AI capabilities mature, there is a growing convergence of AI and IoT platforms. Integrated platforms are emerging that combine IoT data management, connectivity, and AI-driven analytics. These platforms facilitate seamless deployment of AI models across diverse IoT devices, enabling predictive maintenance, anomaly detection, and optimized resource management. Moreover, with the proliferation of connected devices in AIoT ecosystems, cybersecurity remains a critical concern. Emerging trends focus on integrating AI-driven security measures, such as anomaly detection and behavior analysis, to mitigate risks associated with data breaches and unauthorized access. Privacy-preserving AI techniques, including federated learning and differential privacy, are also gaining traction to protect sensitive IoT data. Furthermore, Industries such as healthcare and smart cities are leveraging AIoT technologies to improve efficiency and quality of services. In healthcare, AIoT facilitates remote patient monitoring, personalized treatment plans, and predictive diagnostics

through continuous data collection from wearable devices and medical sensors. Similarly, in smart cities, AIoT applications enable intelligent traffic management, energy optimization, and environmental monitoring, enhancing urban sustainability and quality of life.

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Key Findings of the Study
By component, the basic hardware segment accounted for the largest AIoT market share in 2023.
By deployment mode, the cloud segment accounted for the largest artificial intelligence of things market share in 2023.
By industry vertical, maunfacturing segment accounted for the largest AIoT market share in 2023.
By application, video surveillance segment accounted for the largest AIoT market share in 2023.
According to the artificial intelligence of things market analysis, region-wise, North America generated the highest revenue in 2023.

The market players of AIoT industry operating are Microsoft Corporation, SAP SE, Alphabet (Google Inc.), Bosch.IO GmbH, Williot, Hitachi, Ltd., International Business Machines Corporation, Siemens AG, GE Vernova, Terminus Group, Falkonry Inc and Amazon Web Services, 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 AIoT market size globally.

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