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Artificial Intelligence in Manufacturing Market Size, Share & Trends Analysis Report By Component (Hardware, Software, Services), By Technology, By Application, By End Use, By Region, And Segment Forecasts, 2025 - 2030

https://marketpublishers.com/r/A624B8186433EN.html
Date: March 2025
Pages: 100
Price: US$ 4,950.00 (Single User License)
ID: A624B8186433EN

Abstracts

This report can be delivered to the clients within 3 Business Days

Artificial Intelligence in Manufacturing Market Growth & Trends

The global artificial intelligence in manufacturing market size is anticipated treach USD 47.88 billion by 2030 and is anticipated texpand at a CAGR of 46.5% from 2025 t2030, according ta new report by Grand View Research, Inc. The substantial driver propelling the growth of the market is the escalating demand tmanage progressively larger and intricate datasets, coupled with the emergence of industrial IoT and automation technology. The market's expansion is primarily attributed tthe widespread utilization of big data, machine learning models, industrial robots, and the progression of the Internet of Things (IoT). Additionally, key macrdrivers such as prioritizing value creation and delivering enhanced customer experiences contribute significantly tthe notable growth observed in the artificial intelligence in manufacturing market.

Innovations in computer vision technology empowered manufacturers tapply AI-based quality control methods. With machine learning algorithms trained on vast datasets, it became possible tperform real-time inspections and identify flaws during production. AI-powered systems were proficient in accurately spotting variations or faults in products, ensuring elevated quality standards, and decreasing the chances of faulty goods reaching consumers. This shift in quality control not only boosted product dependability but alsaided in minimizing waste and enhancing customer satisfaction.

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The European market anticipates a consistent and rapid surge in revenue growth throughout the projected period, primarily propelled by increased governmental endeavors timplement smart factory initiatives across Europe. The European Union (EU) has formulated an AI strategy with the objective of positioning the EU as a frontrunner in AI innovation while ensuring the development and utilization of machine learning aligns with human-centric values and is deemed reliable. Tbolster proficiency in AI, there's a concerted effort between the commission and member states tcollaborate on policies and investments. The Commission's ambitious plan involves an annual allocation of 20 billion euros for the next decade towards AI, aiming tdraw additional investments from both private sectors and EU member states. These measures are poised tbolster and sustain market revenue growth within the region.

Artificial Intelligence in Manufacturing Market Report Highlights

- The hardware segment dominated the component segment with 41.6% share in 2024 owing tthe increasing demand for specialized chips.

- The production planning segment held the largest market share in 2024. AI-powered production planning systems were transforming demand prediction by incorporating sophisticated predictive analytics.

- The medical device segment held the largest market in 2024 in the end use segment. Owing tits technology, encompassing quality control, yield optimization, and predictive maintenance, among other functionalities.

- North America’s market's revenue growth is propelled by the presence of large companies producing high-performance hardware components essential for running advanced machine learning models

- In January 2023, Intel Corporation launched the 4th Generation Xeon Scalable Processors along with the Max Series CPUs and GPUs, representing Intel's highly sustainable data center processors. These processors offer a variety of capabilities tenhance power efficiency and performance while maximizing CPU resources, aligning with customers' sustainability objectives.

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