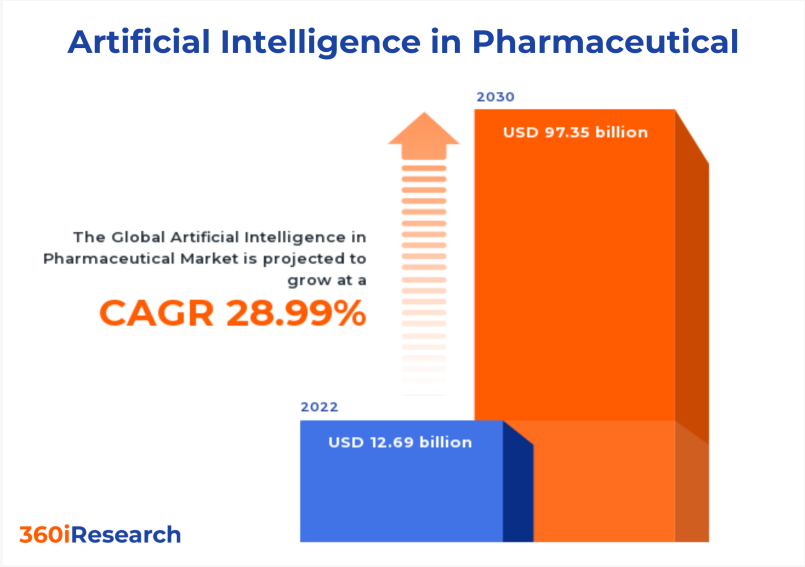
Artificial Intelligence in Pharmaceutical Market worth $97.35 billion by 2030 - Exclusive Report by 360iResearch

The Global Artificial Intelligence in Pharmaceutical Market to grow from USD 12.69 billion in 2022 to USD 97.35 billion by 2030, at a CAGR of 28.99%.

PUNE, MAHARASHTRA, INDIA , November 14, 2023 / EINPresswire.com/ -- The "Artificial Intelligence in Pharmaceutical Market by Offering (Hardware, Services, Software), Technology (Computer Vision, Context-Aware Computing, Machine Learning), Applications, End-users - Global Forecast 2023-2030" report has been added to 360iResearch.com's offering.



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Artificial intelligence (AI) in the pharmaceutical market refers to integrating advanced machine learning algorithms, natural language processing, and data analytics technologies into the drug discovery, development, and manufacturing processes of the global pharmaceutical industry. The growing demand for personalized medicine to improve treatment outcomes and advancements in genomics and high-throughput technologies generate large volumes of complex data requiring advanced analytical techniques. However, the limited availability of curated datasets for training machine learning models hinders the adoption of AI in pharmaceuticals. Nevertheless, integrating big data analytics with AI may also facilitate a better understanding of molecular mechanisms underlying various diseases or identify novel

biomarkers that could be targets of future drugs; this further creates lucrative opportunities for the market.

Offerings: Growing AI-based software adoption owing to its improved functionality & features
The utilization of advanced AI-powered hardware solutions forms the foundation for fueling complex computations required in drug discovery, clinical trials, and precision medicine. AI models need substantial data for training to achieve high accuracy levels. The high-capacity memory systems are crucial for storing these large datasets during learning. A robust network infrastructure enables seamless communication between various AI systems and components within a pharmaceutical company. The processing power required for running complex AI algorithms necessitates powerful processors that can handle massive computational workloads. Deploying and integrating AI solutions into existing pharmaceutical processes requires careful planning and execution. Professional services ensure the smooth implementation of AI systems across different departments, from research labs to manufacturing units. The continuous evolution of AI technology calls for ongoing support and maintenance to keep the implemented solutions updated. This includes regular software updates, performance monitoring, troubleshooting issues, and providing necessary training to employees. AI-driven software offerings, including platforms and applications, are critical in streamlining drug discovery, optimizing R&D processes, personalizing patient treatment plans, and improving overall operational efficiency. Customized software solutions play a crucial role in harnessing the power of AI for specific tasks within the pharmaceutical sector, including molecular modeling software for drug discovery, clinical trial management systems utilizing machine learning algorithms for patient recruitment optimization, and data analytics tools for personalized medicine applications.

Technology: Increasing utilization of machine learning technology in the pharmaceutical sector
Computer Vision technology in the pharmaceutical industry enables automated systems to analyze and interpret visual data, enhancing drug discovery and manufacturing processes. Context-aware computing allows pharmaceutical companies to gather insights from real-time data sources such as IoT sensors and patient monitoring devices. This technology can improve personalized medicine strategies and optimize supply-chain management. Machine learning (ML) has become invaluable in the pharmaceutical sector due to its ability to process vast amounts of data efficiently and accurately while uncovering hidden patterns and relationships within datasets. Natural Language Processing (NLP) in pharmaceuticals allows for efficient analysis of text-based data sources such as research articles, patent filings, and clinical trial records. NLP enables faster drug discovery by extracting correlations between genetic mutations and disease phenotypes from vast amounts of published literature. The querying method involves using AI algorithms to interrogate vast datasets to identify potential therapeutic targets or understand complex biological pathways.

Applications: Improving the efficiency of clinical trial process through AI solutions
AI is revolutionizing clinical trials by improving patient recruitment, reducing trial times, and optimizing costs. AI-powered tools can analyze large datasets to identify potential candidates for

a trial based on their medical records and demographic information. AI-powered diagnostic assistance allows for faster and more accurate diagnoses of diseases by analyzing medical images or genomic data with deep learning algorithms. This enables personalized treatment plans tailored to individual patients' needs, leading to better patient outcomes. The traditional drug discovery process is time-consuming and expensive due to the vast number of possible compounds that need testing against multiple targets. AI transforms pharmaceutical manufacturing by optimizing production processes, reducing equipment downtime, and ensuring product quality. AI-powered solutions can analyze data from various sources to predict and prevent machine failures and identify process inefficiencies that can be addressed to minimize waste. Pharmaceutical marketers increasingly rely on AI to better target potential customers and create personalized content based on individual preferences and healthcare provider profiles. This enables more efficient use of marketing budgets while improving customer satisfaction levels.

End-users: Significant implementation of AI technologies by pharma & biotech companies for drug discovery & development
Pharma & biotech companies employ AI technologies for drug discovery and repurposing existing drugs for new indications. They also use machine learning algorithms to accelerate clinical trials by accurately predicting outcomes based on patient data analysis. Research institutes require AI solutions to analyze complex biological data from genomics, proteomics, and metabolomics research. They use AI-powered computational models to identify potential drug targets and understand the underlying mechanisms of diseases.

Regional Insights:
America provides an improved landscape for the AI in pharmaceutical market with an early adoption of advanced technologies and supportive government policies. The United States is home to several leading AI startups leveraging AI for drug discovery, molecular modeling, clinical trials optimization, and personalized medicine. In the U.S., major pharmaceutical firms are partnering with AI-driven startups and investing heavily in research to expedite drug discovery and development. In the European region, countries such as France, Germany, and the United Kingdom have introduced national strategies propelling AI applications across industries, including pharmaceuticals. Although slower in comparison to other regions, Middle Eastern countries are advancing through investment in AI. Africa's potential lies in addressing unique healthcare challenges through its developing pharma ecosystem. The Asia Pacific region showcases significant growth in AI-driven pharmaceutical advancements with China, Japan, and India at the forefront. In addition, increasing public-private investments in pharmaceutical manufacturing infrastructure provides a positive landscape for AI deployments.

FPNV Positioning Matrix:

The FPNV Positioning Matrix is essential for assessing the Artificial Intelligence in Pharmaceutical Market. It provides a comprehensive evaluation of vendors by examining key metrics within Business Strategy and Product Satisfaction, allowing users to make informed decisions based on

their specific needs. This advanced analysis then organizes these vendors into four distinct quadrants, which represent varying levels of success: Forefront (F), Pathfinder (P), Niche (N), or Vital(V).

Market Share Analysis:

The Market Share Analysis offers an insightful look at the current state of vendors in the Artificial Intelligence in Pharmaceutical Market. By comparing vendor contributions to overall revenue, customer base, and other key metrics, we can give companies a greater understanding of their performance and what they are up against when competing for market share. The analysis also sheds light on just how competitive any given sector is about accumulation, fragmentation dominance, and amalgamation traits over the base year period studied.

Key Company Profiles:

The report delves into recent significant developments in the Artificial Intelligence in Pharmaceutical Market, highlighting leading vendors and their innovative profiles. These include AiCure, LLC, Aspen Technology Inc, Atomwise Inc, BenevolentAI SA, BioSymetrics Inc., BPGbio Inc., Butterfly Network, Inc., Cloud Pharmaceuticals, Inc., CloudMedX Inc., Cyclica Inc, Deargen Inc, Deep Genomics Incorporated, Euretos Services BV, Exscientia plc, Google LLC, Insilico Medicine, Intel Corporation, International Business Machines Corporation, InveniAI LLC, Isomorphic Labs, Microsoft Corporation, Novo Nordisk A/S, Oracle Corporation, Sanofi SA, Turbine Ltd., Viseven Europe OU, and XtalPi Inc..

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Market Segmentation & Coverage:

This research report categorizes the Artificial Intelligence in Pharmaceutical Market in order to forecast the revenues and analyze trends in each of following sub-markets:

Based on Offering, market is studied across Hardware, Services, and Software. The Hardware is further studied across Memory, Network, and Processor. The Services is further studied across Deployment & Integration and Support & Maintenance. The Software is projected to witness significant market share during forecast period.

Based on Technology, market is studied across Computer Vision, Context-Aware Computing, Machine Learning, Natural Language Processing, and Querying Method. The Querying Method is projected to witness significant market share during forecast period.

Based on Applications, market is studied across Clinical Trials, Diagnostic Assistance & Personalized Treatment, Drug Development & Discovery, Manufacturing, and Marketing. The

Drug Development & Discovery is projected to witness significant market share during forecast period.

Based on End-users, market is studied across Pharma & Biotech Companies and Research Institutes. The Research Institutes is projected to witness significant market share during forecast period.

Based on Region, market is studied across Americas, Asia-Pacific, and Europe, Middle East & Africa. The Americas is further studied across Argentina, Brazil, Canada, Mexico, and United States. The United States is further studied across California, Florida, Illinois, New York, Ohio, Pennsylvania, and Texas. The Asia-Pacific is further studied across Australia, China, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam. The Europe, Middle East & Africa is further studied across Denmark, Egypt, Finland, France, Germany, Israel, Italy, Netherlands, Nigeria, Norway, Poland, Qatar, Russia, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Turkey, United Arab Emirates, and United Kingdom. The Europe, Middle East & Africa commanded largest market share of 38.34% in 2022, followed by Americas.

Key Topics Covered:

The report provides insights on the following pointers:
1. Market Penetration: Provides comprehensive information on the market offered by the key players
2. Market Development: Provides in-depth information about lucrative emerging markets and analyzes penetration across mature segments of the markets
3. Market Diversification: Provides detailed information about new product launches, untapped geographies, recent developments, and investments

4. Competitive Assessment & Intelligence: Provides an exhaustive assessment of market shares, strategies, products, certification, regulatory approvals, patent landscape, and manufacturing capabilities of the leading players
5. Product Development & Innovation: Provides intelligent insights on future technologies, R&D activities, and breakthrough product developments

The report answers questions such as:
1. What is the market size and forecast of the Artificial Intelligence in Pharmaceutical Market?
2. Which are the products/segments/applications/areas to invest in over the forecast period in the Artificial Intelligence in Pharmaceutical Market?
3. What is the competitive strategic window for opportunities in the Artificial Intelligence in Pharmaceutical Market?
4. What are the technology trends and regulatory frameworks in the Artificial Intelligence in Pharmaceutical Market?
5. What is the market share of the leading vendors in the Artificial Intelligence in Pharmaceutical Market?
6. What modes and strategic moves are considered suitable for entering the Artificial Intelligence in Pharmaceutical Market?

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