AI in Clinical Trials Market by Function (Patient Recruitment, Site Optimization, Data Management, Quality, Regulatory), Phase (I, II, III), Indication (Cancer, CNS, CVS), Tool, End-User (Pharma/Biotech, CRO, Hospitals) & Region - Global Forecast to 2030

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Report description:

The AI in clinical trials market is projected to reach USD 2.74 billion by 2030 from USD 1.35 billion in 2024, at a CAGR of 12.4% from 2024 to 2030. The growing demand for improvements in effectiveness, recruitment of patients in a shorter duration, and accurate analysis of data is the key factor fuelling the market for AI in clinical trials. Solutions powered by AI assist in shortening the duration of various phases of the trial and also in improving patient retention levels using predictive modelling and engagement strategies. In addition, the increase in use of wearables and EMR systems facilitates monitoring at every stage of the course, hence reinforcing the application of AI in trials. Nevertheless, a few obstacles including regulatory norms, prohibitively high cost of implementation and fears of data breach act as constraints hindering the full-scale use of AI in clinical trials.

"Infectious diseases had the fastest growth rate in the AI in clinical trials market during the forecast period, by indication."

In the sector of conducting clinical studies with the application of AI technologies, it is likely that among all indications infectious diseases will experience the most rapid growth. Such development is very fast owing to the global appeal for quicker and better solutions against disease outbreaks such as the pandemic. AI speed up the patient enrolment process, enhance forecasting, better structure the trials all of which help to deal with fast spreading viruses in a common sense. There has been a significant rise in the use of advanced technologies especially AI owing to the increased campaigns of fighting infectious diseases.

"By end user, the pharmaceutical & biopharma companies to account for largest market share in 2023."

By end user, AI in clinical trials market is bifurcated into pharmaceutical & biopharma companies, research institutes & labs, healthcare providers, contract research organizations, and medical device manufacturers. The majority of the market share to be occupied by pharmaceutical & biopharma companies' segment. This is due to the great extent of research and development expenditure, which in turn raises the application of AI for faster drug development processes, better clinical trial designs as well as enhanced patient recruitment for the companies. Such AI systems are designed for such firms to help in a complex analysis of

large data sets, quicken the introduction of products into the market, and control the ever-increasing costs which are very essential in winning the competition in the case of the pharmaceutical sector.
"Asia Pacific is estimated to register the highest CAGR over the forecast period."
The AI in clinical trials market is geographically segmented into North America, Europe, Asia Pacific, Latin America, and Middle East & Africa. The Asia Pacific AI in clinical trials market is projected to register highest CAGR during the forecast period. The Asia Pacific is benefiting from the fast-developing healthcare infrastructure, advances in AI technologies and expansion of clinical research. With countries such as China, India and Japan encouraging the use of AI in healthcare to facilitate large and varied populations and organize clinical trials more efficiently. Furthermore, owing to the favourable government policies, increasing proliferations of contract research organizations (CROs) and cheaper operation costs in the market relative to the Western regions, many multinational pharmaceutical companies are making it their business to invest in AI clinical trials within the region.
Breakdown of supply-side primary interviews by company type, designation, and region:
- By Company Type: Tier 1 (40%), Tier 2 (35%), and Tier 3 (25%)
- By Designation: Managers (40%), Directors (35%), and Others (25%)
- By Region: North America (40%), Europe (30%), Asia Pacific (20%), Latin America (5%) and Middle East Africa (5%)
List of Companies Profiled in the Report:
o IQVIA Inc. (US)
o Saama. (US)
o Dassault Systemes (Medidata) (France)
o Phesi (US)
o PathAI, Inc. (US)
o Unlearn.ai, Inc. (US)
o Deep6.ai (US)
o Microsoft (US)
o IBM (US)
o NVIDIA Corporation (US)
o Insilico Medicine (US)
o ConcertAI. (US)
o AiCure. (US)
o Median Technologies. (France)
o Lantern Pharma Inc. (US)
o Citeline, a Norstella Company (US)
o Tempus AI, Inc. (US)
o TriNetX, LLC (US)
o ReviveMed Inc. (US)
o Euretos. (US)
o VeriSIM Life. (US)
o Triomics (US)
o Ardigen (Poland)
o QuantHealth Ltd. US)
o DEEP GENOMICS. (Canada)

Research Coverage:
This research report categorizes the AI in clinical trials market by offerings (end-to-end solutions, niche solutions, technology providers and services), function (patient recruitment, trial design optimization, data management & quality control, adverse event prediction & detection, drug repurposing, and regulatory compliance), phase (phase I, phase II, phase III and phase IV), deployment mode (cloud-based solutions, and on-premise solutions), indication (oncology, neurological diseases, cardiovascular diseases, metabolic diseases, infectious diseases, immunology diseases, and others (gastrointestinal, respiratory & reproductive),

technology (machine learning, NLP, computer vision, robotic process automation, and others), application (biomarkers, cell & gene therapy, regenerative medicine, and medical devices & diagnostics), end user (pharmaceutical & biotechnology companies, research institutes & labs, healthcare providers, contract research organizations (CROs), and medical device manufacturers) and region. The scope of the report covers detailed information regarding the major factors, such as drivers, restraints, challenges, and opportunities, influencing the growth of the AI in clinical trials market. A thorough analysis of the key industry players has been done to provide insights into their business overview, offerings, and key strategies such as acquisitions, collaborations, partnerships, mergers, product/service launches & enhancements, and approvals in the AI in clinical trials market. Competitive analysis of upcoming startups in the AI in clinical trials market ecosystem is covered in this report.

Reasons to Buy the Report

The report will help market leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall AI in clinical trials market and the subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to better position their businesses and plan suitable go-to-market strategies. The report also helps stakeholders understand the market pulse and provides information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

-□Analysis of key drivers: (Growing demand for faster and more efficient drug development), restraints (High costs associated with implementing AI solutions), opportunities (Increased focus on precision medicine), and challenges (Complexity of integrating AI into traditional clinical trial frameworks) influencing the growth of the AI in clinical trials market.

-□Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the AI in clinical trials market.

-□Market Development: Comprehensive information about lucrative markets - the report analyses the AI in clinical trials market across varied regions.

-□Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the AI in clinical trials market.

-□Competitive Assessment: In-depth assessment of market shares, growth strategies, and service offerings of leading players such as IQVIA Inc. (US), Dassault Systemes (Medidata) (France), Tempus AI, Inc. (US), Insilico Medicine (US), ConcertAI. (US), AiCure. (US) PathAI, Inc. (US), etc. among others in AI in clinical trials market

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