AI for Pharmaceutical Market By Product Type (Software, Services and Hardware); By Technology (Deep Learning, Querying MethodNatural Language Processing and Context aware Processing); By Application (Drug Discovery &Repurposing (Preclinical Phase), Clinical Research Trial, Personalized Medicine and Others); and Region – Analysis of Market Size, Share & Trends for 2018 – 2020 and Forecasts to 2030

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Abstracts

Market overview
Artificial Intelligence in Pharmaceutical refers to analyzing intricate medical data by simulating human cognition with the help of integrated automated algorithms and software that can operate autonomously, with little to no human involvement to perform tasks that traditionally rely on human expertise. AI is an evolving technology market that recognizes numerous aspects of the pharmaceutical industry, from drug development to diagnosis and even patient care. The use of artificial intelligence in the pharmaceutical and biotech industries over the past five years has redefined how scientists are developing new drugs, tackling disease, and more.

Market Highlights
In 2019, the global artificial intelligence market in medicines was estimated at $XXXX billion and is anticipated to hit $XXXX billion from 2020 to 2030 at a CAGR of 49.8%. Developing new pharmaceuticals and biologics through clinical trials will take more than a decade and cost billions of dollars during that period. AI technology will help make this process quicker and cheaper, which in effect is expected to help make pharmaceutical

and biotechnology companies more efficient and successful. Just 13.8 percent of drugs have been found to pass clinical trials successfully. A company is expected to pay from $180 million to $ 2 billion for every medication to complete the entire cycle of clinical trials and get government approval. Keeping this in mind, pharmaceutical firms use AI to raise success rates for new products while also reducing operational costs.

AI in Pharmaceutical Market Expected Market Growth

Recent Market Highlights in AI in Pharmaceutical Market
AI is used by Verge Genomics to predict the effect of new therapies on patients with ALS & Alzheimer's disease. They use automated data collection and analysis to create solutions to some of today's most common illnesses.

Tencent Holdings has collaborated with UK-based Medopad to create artificial intelligence algorithms capable of detecting Parkinson's disease patients and reducing the amount of time it takes to perform a motor function evaluation from over 30 minutes to less than three minutes.

In September 2019- Atomwise and Jiangsu Hansoh Pharmaceutical Group have initiated a collaboration of up to USD 1.5 billion to design and explore possible drug candidates for up to 11 unspecified target proteins in cancer and multiple other therapeutic areas.

AI in Pharmaceutical Market: Segments
Segment of software to remain the key product category through 2030
Software segment, by product category, held more than three-fifths of the global market share in 2019 and is expected to maintain its dominance by 2030. It is due to continuous innovation in applications that assist healthcare sector demand. However, during the forecast phase, the hardware segment is projected to experience the highest growth rate, a CAGR of 52.3 percent, following the adoption of AI devices to evaluate medical information stored in structured data such as image, genetic, and EP data.

Natural language processing division to remain amongst all other technologies the largest producer of revenue
Natural language processing segment is expected to continue its dominance over the forecast period by technology and produce more than one-third of overall revenue by 2030. Natural language processing enables data sets to be translated into legible narratives that are universally understood by medical professionals and patients, which also helps to interpret perceptions for personal development. Nevertheless, due to its simplicity over other technologies and improved accuracy when equipped with large

quantities of data, the deep learning segment is poised to rise at the fastest CAGR of 51.7 percent.

Personalized medicine segment to experience the highest growth over the forecast period

Application-based customized medicine segment is set to witness the highest growth rate, a CAGR of 52.1 percent. This is compounded by the fact that AI can support gene-level studies that require advanced technology and systems where enormous data can be fed without interruption. Such studies have driven drug discovery research into pharmacogenomics and genotyping. That has contributed to the advancement of personalized medicine, as more and more side effects are caused by conventional medicines in people. The drug discovery & repurposing segment, however, is expected to continue its dominance and hold more than one-third of the global market share in 2030, as AI plays an essential part in drug discovery through studying the drug molecule's pharmacokinetics.

AI in Pharmaceutical Market: Drivers and Restraints

Drivers

AI in Pharmaceutical market raises the processing power

Artificial Intelligence is expected as a lucrative healthcare industry avenue. Implementing AI eliminates the research and development gap in the drug production cycle and helps in targeted drug manufacturing as well as helps pharmaceutical companies streamline research and development activities for customized drugs and complex drug discovery. The AI in the Pharmaceutical Market is driven by the growing need to shorten the process and increasing the efficiency of drug discovery and managing the clinical trials in order to get drugs to treat various chronic and viral diseases quicker. Due to this, Biopharmaceutical industries tend to increase their market share toward AI.

Precision Medicine and rise in Funding For research And Development

The growth in significance of precision medicine and increase in funding for the Research and Development for the use of AI technology in this field are anticipated to help boost the market growth. The advent of the AI in Pharmaceutical market is due to the growing pressure on the drugmaker to lower the drug price. Artificial intelligence renders drug discovery and clinical trials more cost-effective and faster. As AI lowered the failure rate of clinical trials and also eliminated the cost of long-term drug discovery research and development

Restraint

High Cost and Lack of Skilled Professionals

Lack of skilled professionals and IT infrastructure to facilitate easy AI adoption is a major factor that is expected to hamper global AI growth for the pharmaceutical market. Thus, in addition to limited acceptance by healthcare professionals, high costs and technological limitations of AI decision-making will impede market development

AI in Pharmaceutical Market: Regions

AI for Pharmaceutical Market is segmented based on regional analysis into five major regions. These include North America, Latin America, Europe, APAC, and MENA.

Due to the availability of capital investments, the presence of key AI technology providers, and the widespread adoption of AI technologies across the country, North America represented the largest market share in 2019 and is expected to maintain its dominance throughout the forecast period. In addition, a well-developed national healthcare infrastructure is also expected to increase the adoption of AI technologies in pharmaceutical and biopharmaceutical companies.

European AI growth in the pharmaceutical market is expected to develop significantly in the 2020–2030 projected period and is supported by the presence of such key pharmaceutical and biopharmaceutical companies as F. Hoffmann La-Roche AG and Merck KGaA, who take AI for drug discovery, product creation, and product marketing.

From 2020 to 2030, the Asia-Pacific market is projected to expand at the fastest CAGR of 55.8 percent, owing to a significant increase in healthcare expenditure, regional economic development, and the increase in demand for personalized medicines.

AI in the pharmaceutical market is further segmented by region into:
North America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United States and Canada

Latin America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – Mexico, Argentina, Brazil, and Rest of Latin America

Europe Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United Kingdom, France, Germany, Italy, Spain, Belgium, Hungary, Luxembourg, Netherlands, Poland, NORDIC, Russia, Turkey, and Rest of Europe
APAC Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – India, China, South Korea, Japan, Malaysia, Indonesia, New Zealand, Australia, and Rest of APAC
MENA Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – North Africa,

Israel, GCC, South Africa, and Rest of MENA

AI in Pharmaceutical Market: Key Players

Jiangsu Hansoh Pharmaceutical Group

Company Overview

Business Strategy

Key Product Offerings

Financial Performance

Key Performance Indicators

Risk Analysis

Recent Development

Regional Presence

SWOT Analysis

GNS Healthcare

Benevolent AI

IBM

InSilico Medicine Inc.

Globavir Biosciences Inc.

Cloud Pharmaceuticals

Verge Genomics

Recursion Pharmaceuticals,

Flatiron HealthBenevolentAI Ltd

F. Hoffmann La-Roche AG

Merck KGaA

Other Prominent Players

AI in Pharmaceutical Market report also contains analysis on:

AI in pharmaceutical Market Segments:

By Product Type

Hardware

Software

Service

By Technology

Deep Learning

Querying Method

Natural Language Processing

Context-Aware Processing

By Application

Drug Discovery & Repurposing (Preclinical Phase)

Clinical Research Trial

Personalized Medicine

Others

AI in Pharmaceutical Market Dynamics

AI in Pharmaceutical Market Size

Supply & Demand

Current Trends/Issues/Challenges

Competition & Companies Involved in the Market

Value Chain of the Market

Market Drivers and Restraints

FAQs on AI in Pharmaceutical Market

Which segment is anticipated to hold the largest market share?

At what CAGR is the market anticipated to grow between 2020 and 2030?

Who are the key players in AI in the pharmaceutical market?

What could be the challenging factors for the growth of AI in the pharmaceutical market?

What are the growth drivers for AI in the pharmaceutical market?

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22. FLATIRON HEALTHBENEVOLENTAI LTD

23. F. HOFFMANN LA-ROCHE AG

24. MERCK KGAA

Consultant Recommendation
**The above-given segmentations and companies could be subjected to further modification based on in-depth feasibility studies conducted for the final deliverable.

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