

Global Artificial Intelligence in Bioinformatics Market Size Study, by Application (Drug Discovery, Biomarker Identification, Genomics Analysis, Proteomics Analysis, Metabolomics Analysis), by Deployment Mode (On-Premise, Cloud-Based), by Data Offering (Software, Services), by End User (Pharmaceutical & Biotechnology Companies, Academic & Research Institutes, CDMO & CROs, Others) and Regional Forecasts 2024-2032

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Abstracts

The Global Artificial Intelligence in Bioinformatics Market is valued approximately at USD 7.49 Billion in 2023 and is anticipated to grow with a healthy growth rate of more than 14.03% over the forecast period 2024-2032. The integration of AI technologies in bioinformatics is revolutionizing the healthcare landscape by enhancing data analysis capabilities and fostering personalized medicine. AI in bioinformatics aids in the efficient analysis of vast datasets, including genomic, proteomic, and metabolomic data, thereby accelerating drug discovery processes and improving disease diagnostics and treatment plans. The global rise in healthcare costs and the growing adoption of cloud-based AI solutions are creating lucrative opportunities for market expansion. Cloud computing, in particular, democratizes access to AI technologies, enabling researchers without substantial infrastructure to leverage advanced analytical tools.

The increasing prevalence of chronic diseases, alongside advancements in AI algorithms and computational power, is significantly propelling the market's growth. Government initiatives promoting personalized medicine and health IT are further stimulating the market. For instance, the application of AI in drug discovery allows for

the rapid identification of potential drug targets, thereby expediting the development of new therapies. The field of personalized medicine, which aims to tailor medical treatment to individual patient characteristics, is also benefiting from AI's ability to process complex biological data, leading to more effective and individualized treatment plans. Moreover, recent advancements in AI-powered bioinformatics platforms, machine learning for genetic variant interpretation, and deep learning in image-based diagnostics are driving the market forward.

The key regions considered for the Global Artificial Intelligence In Bioinformatics Market study include North America, Europe, Asia-Pacific, Latin America, and the Middle East & Africa. In 2023, North America is expected to hold the dominant market share, driven by the presence of major technology players, advanced healthcare infrastructure, and significant investments in AI research. The region's strong healthcare and biotechnology sectors, coupled with access to extensive healthcare datasets, facilitate the effective application of AI for drug discovery, genomics, and personalized medicine. North America's supportive regulatory environment and innovation hubs further bolster the adoption of AI technologies. Major biotech companies and research institutions in the U.S. and Canada lead the development and integration of AI solutions, driving market growth and reinforcing the region's leadership in the AI-driven bioinformatics field. Europe is also anticipated to witness substantial growth, supported by increased R&D spending and favorable government policies. The Asia-Pacific region is projected to exhibit the fastest growth rate, attributed to rising healthcare expenditures and increasing demand for personalized medicine.

Major market players included in this report are:

Roche

Illumina

Agilent Technologies

BioRad Laboratories

QIAGEN

Bionano Genomics

MGI Tech

NanoString Technologies

Oxford Nanopore Technologies

10x Genomics

Thermo Fisher Scientific

PacBio

The detailed segments and sub-segments of the market are explained below:

By Application:

Drug Discovery

Biomarker Identification

Genomics Analysis

Proteomics Analysis

Metabolomics Analysis

By Deployment Mode:

On-Premise

Cloud-Based

By Data Offering:

Software

Services

By End User:

Pharmaceutical & Biotechnology Companies

Academic & Research Institutes

CDMO & CROs

Others

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Rest of Latin America

Middle East & Africa

Saudi Arabia

South Africa

RoMEA

Years considered for the study are as follows:

Historical year – 2022

Base year – 2023

Forecast period – 2024 to 2032

Key Takeaways:

Market Estimates & Forecast for 10 years from 2022 to 2032.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

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