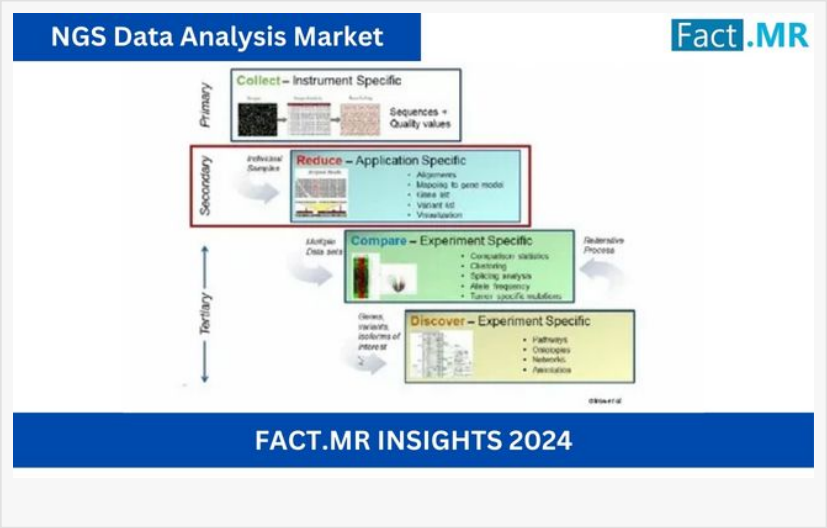
NGS Data Analysis Market Projected to Grow at 10.5% CAGR, Reaching US$ 2.03 Billion by 2034

Extensive usage of NGS data analysis in oncology precision medicine, particularly for breast and lung tumors, driving global market growth, says Fact.MR.



ROCKVILLE, MD, UNITED STATES, December 9, 2024 /EINPresswire.com/ -- Growing demand for advanced bioinformatics systems is driving widespread adoption of NGS data analysis solutions. As such, this updated industry analysis by Fact.MR has placed the global NGS data analysis market at US$ 746.9 million in 2024 and is forecasted to expand at 10.5% CAGR through 2034.

The market is projected to exhibit significant growth with more healthcare providers using sequencing platforms for medical diagnosis. Also, having easy access to genomic and proteomic information is expected to generate lucrative opportunities for NGS data analysis solution providers. Decreasing costs of these sequencing technologies have led to the widespread use of next-generation sequencing (NGS). Urgent need to combat the COVID-19 pandemic has given rise to research and development efforts. This has led to the widespread adoption of NGS data analysis tools. These tools enable researchers to analyze large volumes of genomic data quickly and accurately.

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Growing use of next-generation sequencing (NGS) technologies in medical diagnosis, genetic studies, and personalized treatments for different diseases is driving market growth. With the growing production of genetic data and the declining cost of sequencing, the scale of sequencing projects is projected to increase. This generates demand for advanced bioinformatics systems with effective solutions to manage and analyze the expanding volume of genetic information.

Key Takeaways from Market Study

The global Next-Generation Sequencing (NGS) data analysis market is poised for remarkable growth, with a projected compound annual growth rate (CAGR) of 10.5% from 2024 to 2034. Valued at approximately USD 746.9 million in 2024, the market is expected to more than double, reaching USD 2.03 billion by the end of the forecast period. This robust expansion is driven by increasing adoption of advanced genomic sequencing technologies across various sectors, including healthcare, biotechnology, and personalized medicine. The rising demand for precise, efficient, and scalable data analysis solutions to manage and interpret the massive datasets generated by NGS is also propelling market growth.

Regionally, North America is anticipated to lead the global market, with a projected CAGR of 11.4% through 2034, owing to significant investments in genomic research, advanced healthcare infrastructure, and technological advancements. Among applications, whole-genome sequencing is expected to hold a substantial market share, accounting for 28.6% of the total in 2024, driven by its utility in identifying genetic variants and understanding complex diseases. The growing emphasis on genomics-based research and the adoption of NGS technologies in drug discovery and development further underscore the market's bright outlook.

"Ease of access to genomic and proteomic information and decreasing cost of tools are projected to generate lucrative opportunities for providers of NGS data analysis solutions over the forecast period," says a Fact.MR analyst.

Country-wise Insights

Advancements in genomic research and the growing applications of next-generation sequencing (NGS) in oncology, infectious disease research, personalized medicine, agriculture, and forensics are driving the adoption of whole-genome sequencing services. NGS has transformed genomic studies with its ability to rapidly sequence DNA and RNA with high accuracy and throughput. The need for robust data analysis tools capable of managing large volumes of sequencing data and deciphering complex genomic patterns is critical. Innovations in NGS data analysis platforms, including sophisticated algorithms, machine learning techniques, and cloud-based solutions, are reshaping genomic research and clinical diagnostics. Collaborations among bioinformatics firms, academic institutions, and healthcare providers are further accelerating the development of integrated NGS analysis pipelines.

In academic research, NGS technologies are widely adopted due to their capacity to analyze vast sequencing datasets. The academic research segment is projected to grow at a CAGR of 11.5%, reaching US$ 694.1 million by 2034. Educational institutions are increasingly leveraging advanced NGS data analysis workflows to uncover intricate genomic patterns and drive scientific innovation. As the cost of whole-genome sequencing decreases, its accessibility is fostering greater adoption in academic settings, enhancing the role of NGS in advancing precision

medicine and scientific discovery.

Market Developments

Leading NGS data analysis solution providers are Roche, Illumina, Genestack, Edge Biosystems, and DNAnexus. Providers of NGS data analysis solutions are forming partnerships with several renowned global manufacturers to enhance their market position and secure a significant market share.

In 2023, SOPHiA GENETICS, a company that specializes in healthcare software announced a new partnership with QIAGEN N.V. This partnership aims to merge QIAseq reagent technology with the SOPHiA DDMTM platform. The goal is to enhance tumor analysis using next-generation sequencing (NGS).

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More Valuable Insights on Offer

Fact.MR, in its new offering, presents an unbiased analysis of the NGS data analysis market for 2018 to 2023 and forecast statistics for 2024 to 2034.

The study divulges essential insights into the market based on service type (whole-genome sequencing, exome sequencing, targeted resequencing, DE novo sequencing, RNA sequencing, ChIP sequencing, methyl sequencing), technique (synthesis [SBS] technology, single-molecule real-time [SMRT] technology, ion semiconductor technology), and end user (hospitals, academic research institutes, biotechnology/pharmaceutical companies, contract research organization), across six major regions of the world (North America, Latin America, Europe, East Asia, South Asia & Oceania, and MEA).

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NGS Sample Preparation Market: The NGS Data Analysis Market was valued at US$ 4.2 billion in 2022. From 2022 to 2032, the market is expected to experience significant growth, with a compound annual growth rate (CAGR) of 7.3%, reaching a projected value of US$ 8.5 billion by the end of the forecast period.

Next Generation Patient Monitoring Devices Market: The global next-generation patient monitoring devices market is currently valued at US$ 4.38 billion and is projected to reach US$ 10.27 billion by 2032. The market is anticipated to grow at a strong compound annual growth rate (CAGR) of 8.9% between 2022 and 2032.

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Contact:
US Sales Office
11140 Rockville Pike
Suite 400
Rockville, MD 20852
United States
Tel: +1 (628) 251-1583, +353-1-4434-232 (D)
Sales Team: sales@factmr.com

S. N. Jha
Fact.MR
+ +1 628-251-1583
email us here
Visit us on social media:
X
LinkedIn
