

Global Artificial Intelligence (AI) in Medical Diagnostics Market Size study & Forecast, by Type, Application, End-User, and Regional Forecasts 2025-2035

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Abstracts

The Global Artificial Intelligence (AI) in Medical Diagnostics Market is valued at approximately USD 1.33 billion in 2024 and is projected to grow at a staggering CAGR of over 33.14% during the forecast period 2025–2035. The adoption of AI in the field of medical diagnostics has redefined the paradigm of clinical workflows, offering unparalleled improvements in accuracy, speed, and predictive capabilities. AI-powered diagnostic tools, ranging from imaging interpretation algorithms to in vitro data analysis systems, are now streamlining the early detection and diagnosis of critical diseases. With increasing investments in healthcare digitization and data-driven medicine, the market is witnessing a transformative shift, with stakeholders leveraging AI to bolster diagnostic decision-making, reduce error margins, and optimize patient outcomes.

Fueling the surge is the rising global burden of chronic and lifestyle-related diseases, which necessitates faster and more accurate diagnostic solutions. As cardiovascular, neurological, and oncological conditions continue to challenge traditional diagnostics, AI is being deployed to analyze complex datasets with unprecedented precision. For instance, AI algorithms in imaging have demonstrated superior performance in identifying tumors, lesions, and anomalies across modalities such as MRI, CT, and ultrasound. Additionally, the convergence of big data, cloud computing, and AI analytics has opened new frontiers in the interpretation of vast volumes of medical information, ultimately driving forward clinical efficiency and cost-effective diagnostics.

The regional landscape of the AI in medical diagnostics market highlights North America as the dominant player, attributed to robust healthcare infrastructure, high adoption of

advanced technologies, and a strong presence of key AI solution providers. The United States, in particular, is spearheading innovation through significant R&D investments and supportive regulatory frameworks that promote AI integration in healthcare. Meanwhile, Europe follows closely, benefiting from strong governmental push towards digital health and widespread AI pilot programs across diagnostic laboratories and hospitals. The Asia Pacific region is poised to experience the fastest growth, primarily driven by rapid urbanization, expanding patient base, and escalating demand for improved healthcare access in countries like China, India, and Japan. Strategic partnerships and government-led AI initiatives are also catalyzing the market expansion in emerging economies.

Major market player included in this report are:

IBM Corporation

Siemens Healthineers

GE HealthCare

Aidoc

PathAI

Tempus Labs

Google Health (Alphabet Inc.)

Butterfly Network Inc.

Arterys Inc.

Zebra Medical Vision

Qure.ai

Digital Diagnostics Inc.

NVIDIA Corporation

Microsoft Corporation

Canon Medical Systems Corporation

Global Artificial Intelligence (AI) in Medical Diagnostics Market Report Scope:

Historical Data – 2023, 2024

Base Year for Estimation – 2024

Forecast period - 2025-2035

Report Coverage - Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Regional Scope - North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope - Free report customization (equivalent up to 8 analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values for the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within the countries involved in the study. The report also provides detailed information about crucial aspects, such as driving factors and challenges, which will define the future growth of the market. Additionally, it incorporates potential opportunities in micro-markets for stakeholders to invest, along with a detailed analysis of the competitive landscape and product offerings of key players. The detailed segments and sub-segments of the market are explained below:

By Type:

In Vitro Diagnostics

Diagnostic Imaging

Other Types

By Application:

Cardiology

Oncology

Neurology

Obstetrics/Gynecology

Other Applications

By End-User:

Hospitals

Diagnostic Imaging Centers

Diagnostic Laboratories

Other End-Users

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

Rest of Europe

Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

Latin America

Brazil

Mexico

Middle East & Africa

UAE

Saudi Arabia

South Africa

Rest of Middle East & Africa

Key Takeaways:

Market Estimates & Forecast for 10 years from 2025 to 2035.

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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