

# AI Neurology Operating Room Market to Reach USD 1.5 Billion by 2033, Driven by Surge in Brain Research

*Major AI neurology operating room market growth factor is rising investments in brain research, advancing neurosurgical precision & improving patient outcomes*

VANCOUVER, BC, CANADA, May 13, 2025 /EINPresswire.com/ -- The latest market intelligence study, called "Global [AI Neurology Operating Room Market](#) Forecast to 2028," jots down some of the most prominent growth potentials of the global AI Neurology Operating Room market. The report is

primarily targeted at the industry stakeholders looking to capitalize on this report's contents to make improved business decisions. The report is further intended to help the readers gain vital insights into the global market, particularly the prevailing growth opportunities and competitive scenario. The insightful data & information provided by this report are gathered from various primary and secondary sources.

The global AI neurology operating room market is poised for significant growth, with its value expected to rise from USD 0.051 billion in 2024 to USD 1.5 billion by 2033. The market is projected to grow at a robust compound annual growth rate (CAGR) of 45.90% during the forecast period.

The rising demand for advanced neurosurgical procedures, improved patient outcomes, and better surgical precision are key factors propelling the adoption of AI in neurology operating rooms. Rapid investments in neuroscience, neuroimaging, and AI-powered diagnostics are encouraging hospitals and healthcare providers to integrate intelligent solutions into surgical environments.

To avail Sample Copy of the report @ <https://www.emergenresearch.com/request-sample/4511>



AI technologies are making it easier for doctors to map the brain in real-time, perform robotic-assisted surgeries, and use predictive tools to reduce surgical risks. Support from governments, private investors, and research institutions is increasing for AI-based systems to treat serious neurological conditions like Alzheimer's and Parkinson's diseases. The global push for minimally invasive surgery is also driving interest in AI-enabled neurology operating rooms.

The adoption of AI in surgical settings is gaining momentum as hospitals modernize their infrastructure. Upgraded healthcare facilities across emerging markets are playing a major role in this trend. Hospitals are equipping their operating rooms with AI-powered imaging tools, robotic surgical systems, and real-time analytics, all of which help doctors make faster and safer decisions.

An aging global population and increasing incidence of neurological disorders are further fueling demand. Conditions such as stroke, epilepsy, brain tumors, and Parkinson's disease are becoming more common, and AI-assisted surgery offers a more accurate and less invasive approach to treatment.

In a key development, the U.S. Food and Drug Administration approved Neuralink's first human clinical trial for brain implants in May 2023. The study, called PRIME (Precise Robotically Implanted Brain-Computer Interface), marks a milestone in the integration of AI and brain research.

In December 2023, Proximie launched a software development kit (SDK) to help hospitals digitize operating and diagnostic rooms. The platform supports telepresence, data management, and analytics, enabling seamless collaboration among surgeons and healthcare providers.

Request Customization In The Report @ <https://www.emergenresearch.com/request-for-customization/4511>

## Market Drivers

One of the strongest market drivers is the growing number of people affected by neurological disorders. As these conditions rise due to aging populations, lifestyle factors, and genetics, hospitals are seeking smarter, safer, and more efficient surgical tools. AI-powered neurosurgical systems improve surgical accuracy and patient recovery time, and help reduce the risk of complications.

Advancements in machine learning, robotic-assisted surgery, and real-time data analysis are boosting the confidence of healthcare providers in adopting these new technologies. Companies like Caresyntax, which partnered with U.S. liability insurer ProAssurance in June 2023, are working to improve surgical safety through AI-driven platforms.

## Market Challenges

Despite the promising outlook, the market faces a key challenge: the shortage of trained professionals. AI neurology operating rooms require not only skilled neurosurgeons but also specialists who understand AI tools and data interpretation. Many hospitals face hurdles such as high training costs, resistance to change, and limited access to AI education—especially in developing regions. Overcoming this gap will require structured training programs and stronger partnerships between healthcare providers and AI developers.

## Market Segmentation

By technology type, the market is segmented into machine learning & deep learning, natural language processing (NLP), and others. Machine learning & deep learning dominated the market in 2024 due to their growing use in enhancing surgical precision and real-time diagnostics.

Meanwhile, natural language processing is expected to grow at the fastest pace over the forecast period. NLP helps in understanding patient data, processing voice commands during surgery, and managing surgical documentation efficiently.

As AI becomes more central to healthcare systems worldwide, the AI neurology operating room market is set for transformative growth. Investments in healthcare modernization, combined with innovations in brain research and surgical technologies, are opening new frontiers in the treatment of neurological diseases.

The leading contenders in the global AI Neurology Operating Room market are listed below:

Activ Surgical Inc.

Brainomix Limited

Caresyntax Corp

LeanTass, Inc.

Medtronic, Plc

Proximie

Theartor, Inc.

DeepOR S.A.S

AI Neurology Operating Room Market Segmentation Analysis

Component Outlook (Revenue, USD Billion; 2020-2033)

Software-as-a-Service

Hardware

Technology Outlook (Revenue, USD Billion; 2020-2033)

Nature Language Processing

Machine Learning and Deep Learning

Others

Application Outlook (Revenue, USD Billion; 2020-2033)

Training

Diagnosis

Surgical Planning and Rehabilitation

Pre-Operative

Intra-Operative

Post-Operative

Outcome Prediction and Risk Analysis

Others

Regional Outlook of the AI Neurology Operating Room Market

The global AI Neurology Operating Room market has been categorized into several important geographical regions, including North America, Europe, Asia Pacific, Latin America, and Middle East & Africa. In this section, authors of the report have studied the presence of the global AI Neurology Operating Room market across major geographies. Moreover, the estimated market share, market size, revenue contribution, sales network and distribution channel, and other crucial elements of each regional segment have been detailed in the report.

Browse The Full AI Neurology Operating Room Market Report Description, Along With The Tocs And List Of Facts And Figures @ <https://www.emergenresearch.com/industry-report/ai->

## [neurology-operating-room-market](#)

Key reasons to buy the Global AI Neurology Operating Room Market report:

The latest report comprehensively studies the global AI Neurology Operating Room market size and provides useful inference on numerous aspects of the market, such as the current business trends, market share, product offerings, and product share.

The report offers an insightful analysis of the regional outlook of the market.

It offers a detailed account of the end-use applications of the products & services offered by this industry.

The report holistically covers the latest developments taking place in this industry. Therefore, it lists the most effective business strategies implemented by the market rivals for ideal business expansion.

The report also provides an extensive analysis of the key market elements, such as drivers, constraints, opportunities, limitations, threats, and micro and macro-economic factors. The exhaustive SWOT analysis, Porter's Five Forces analysis, feasibility analysis, and investment return analysis included in the report are intended to help the reader tactfully formulate business growth strategies. Strategic recommendations for the established market players assist them in fortifying their financial positions in the market.

Click Here To Buy Now @ <https://www.emergenresearch.com/select-license/4511>

Thank you for reading our report. For further information regarding the report or to get a customized copy of it, please connect with us. We will make sure you receive a report perfectly tailored to your needs.

Latest Published Reports by Emergen Research:

AI Neurology Operating Room Market Size @ <https://www.emergenresearch.com/industry-report/ai-neurology-operating-room-market/market-size>

AI Neurology Operating Room Market Share @ <https://www.emergenresearch.com/industry-report/ai-neurology-operating-room-market/market-share>

AI Neurology Operating Room Market Trends @ <https://www.emergenresearch.com/industry-report/ai-neurology-operating-room-market/market-trends>

AI Neurology Operating Room Regional Market Demand @ <https://www.emergenresearch.com/industry-report/ai-neurology-operating-room->

[market/regional-market-demand](#)

AI Neurology Operating Room Market Analysis @ <https://www.emergenresearch.com/industry-report/ai-neurology-operating-room-market/market-analysis>

Eric Lee

Emergen Research

+ +91 90210 91709

[sales@emergenresearch.com](mailto:sales@emergenresearch.com)

Visit us on social media:

[LinkedIn](#)

[Facebook](#)

[X](#)

---

This press release can be viewed online at: <https://www.einpresswire.com/article/812187888>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.