

Deep Learning in Drug Discovery Market and Deep Learning in Diagnostics Market (2nd Edition), 2023-2035: Distribution by Therapeutic Area (Oncological Disorders, Infectious Diseases, Neurological Disorders, Immunological Disorders, Endocrine Disorders, Cardiovascular Disorders, Respiratory Disorders, Eye Disorders, Musculoskeletal Disorders, Inflammatory Disorders and Other Disorders) and Key Geographical Regions (North America, Europe, Asia Pacific and Rest of the World): Industry Trends and Global Forecasts, 2023-2035

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Abstracts

The deep learning market is expected to reach USD 34.5 billion in 2023 anticipated to grow at a CAGR of 21.9% during the forecast period 2023-2035.

Owing to the evolution of computing devices from the mid-twentieth century onwards has transcended their initial purpose of basic calculations, leading to the emergence of artificial intelligence (AI). This field has empowered machines to comprehend data and perform tasks beyond traditional programming. At the core of AI lies machine learning, enabling computers to learn and adapt without explicit programming. Within machine learning, deep learning stands out as a sophisticated subset that employs multi-layered neural networks to interpret vast amounts of unstructured data, yielding valuable insights, particularly in big data analysis.

In the life sciences, especially in domains such as drug discovery and diagnostics, deep learning's application has stemmed from its ability to mimic the human brain.

Diagnostics, within the healthcare sector, notably benefit from the capabilities of deep learning. Addressing challenges encountered in drug discovery, like high attrition rates and financial burdens, deep learning has significantly boosted productivity in this field. Recent advancements in deep learning techniques have broadened its applications in medical imaging, molecular profiling, virtual screening, and comprehensive data analysis.

Fueled by ongoing innovation, the deep learning market in healthcare and drug discovery is poised for substantial growth. The profound impact of computational medicine, combined with continuous advancements in deep learning techniques, foreshadows a promising future for this field, indicating significant market expansion in the forecast period.

Report Coverage

An executive summary of the key insights captured in our research. It offers a high-level view of the current state of deep learning market and its likely evolution in the mid-to-long term.

A general overview of big data revolution in the medical industry. It also presents information on artificial intelligence, machine learning, and deep learning algorithms in the healthcare sector. Further, the chapter concludes with a discussion on various applications of deep learning within the healthcare sector.

Detailed assessment of the overall market landscape of more than 70 companies offering deep learning technologies and services for the purpose of drug discovery, based on several relevant parameters, such as year of establishment, company size, location of headquarters, application area, focus area, therapeutic area, operational model, along with information on the company's service and product centric models.

Elaborate profiles of key players developing technologies and offering services related to deep learning, specifically for drug discovery and diagnostics, located across North America, Europe and Asia Pacific (shortlisted based on a proprietary criterion). Each profile includes a brief overview of the company, along with details related to its financial information (wherever available), service

portfolio, recent developments and an informed future outlook.

A qualitative analysis, highlighting the five competitive forces prevalent in this domain, including threats for new entrants, bargaining power of companies using deep learning-based drug discovery and diagnostics, bargaining power of drug developers, threats of substitute technologies and rivalry among existing competitors.

A detailed analysis of over 420 completed and ongoing clinical trials, based on several relevant parameters, such as trial registration year, trial status, patient enrollment, type of sponsor / collaborator, therapeutic area, trial focus area, study design, and geography. In addition, the chapter highlights the most active industry and non-industry players (in terms of number of clinical trials conducted).

A detailed analysis of various investments made by players engaged in this domain, during the period 2019-2022, based on several relevant parameters, such as year of funding, amount invested, type of funding (seed financing, venture capital financing, IPOs, secondary offerings, debt financing, grants, and other offerings), focus area, therapeutic area, and geography. In addition, the chapter highlights the most active players (in terms of number of funding instances and amount invested) and key investors (in terms of number of funding instances).

An analysis of the start-ups / small players (established post 2015, with less than 50 employees) engaged in the deep learning market focused on drug discovery and diagnostics. The chapter includes information on several relevant parameters, such as focus area, therapeutic area, operational model, compatible device, type of offering and start-up health indexing.

A valuation analysis of companies that are involved in the deep learning-based drug discovery and diagnostics market, based on our proprietary, multi-variable dependent valuation model to estimate the current valuation / net worth of industry players.

An insightful market forecast and opportunity analysis, highlighting the future growth potential of the deep learning in drug discovery market till the year 2035. In order to provide details on the future opportunity, our projections have been segmented based on therapeutic area (oncological disorders, infectious

diseases, neurological disorders, immunological disorders, endocrine disorders, cardiovascular disorders, respiratory disorders and other disorders) and key geographical regions (North America, Europe, Asia Pacific and Rest of the World). Further, the chapter includes estimates of the likely cost saving potential of deploying deep learning technologies for drug discovery.

An insightful market forecast and opportunity analysis, highlighting the future growth of the deep learning in diagnostics market till the year 2035. In order to provide details on the future opportunity, our projections have been segmented based on therapeutic area (oncological disorders, cardiovascular disorders, neurological disorders, endocrine disorders, respiratory disorders, ophthalmic disorders, infectious diseases, musculoskeletal disorders, inflammatory disorders and other disorders) and key geographical regions (North America, Europe, Asia Pacific and Rest of the World). Further, the chapter includes estimates of the likely cost saving potential of deploying deep learning technologies for diagnostics.

The opinions expressed by selected key opinion leaders on the applications and challenges associated with deep learning in the healthcare sector. The chapter provides key takeaways from presentations and videos of these experts, highlighting the future opportunity for these models within the healthcare industry.

Key Market Companies

Aegicare

Aiforia Technologies

Ardigen

Berg

Google

Huawei

Merative

Nference

Nvidia

Owkin

Phenomic AI

Pixel AI

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