

# **Ai In Pharma Market Outlook 2025-2034: Market Share, and Growth Analysis By Technology (Context-Aware Processing, Natural Language Processing, Querying Method, Deep Learning), By Drug Type (Small Molecule, Large Molecules), By Application**

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## **Abstracts**

The Ai In Pharma Market is valued at USD 3.4 billion in 2025 and is projected to grow at a CAGR of 24.3% to reach USD 24.1 billion by 2034. The AI in pharma market is revolutionizing drug discovery and development, driven by the need for faster, more efficient, and personalized treatments. This market involves the application of artificial intelligence technologies, such as machine learning and deep learning, to optimize various aspects of pharmaceutical research and development. AI-powered solutions enable companies to automate tasks, improve drug discovery, and personalize medicine. By analyzing vast datasets from genomics, proteomics, and clinical trials, AI can identify patterns and insights that may be difficult for humans to detect. The scope of this market extends across various segments, including drug discovery, clinical trials, and manufacturing. The focus is on developing intelligent systems that can enhance productivity, reduce costs, and improve patient outcomes. The adoption of AI is facilitating a shift from traditional, trial-and-error approaches to data-driven, predictive methods.

2024 has seen a surge in AI adoption within the pharma industry, with a focus on drug discovery and clinical trial optimization. We've witnessed increased use of machine learning to analyze genomics data, identifying novel drug targets and biomarkers. The integration of AI with real-world data has improved patient outcome predictions and treatment effectiveness. Furthermore, there's been a noticeable increase in the use of AI for optimizing clinical trial design and patient recruitment. The development of AI-powered platforms for drug repurposing has also accelerated, enabling faster

identification of new uses for existing drugs. The use of generative AI for novel drug design has seen rapid growth. The implementation of AI into manufacturing process optimization has improved efficiency.

The AI in pharma market is expected to experience continued growth and innovation. We anticipate further advancements in personalized medicine, with the development of AI-powered diagnostics and tailored therapies. The integration of AI with digital twins will enable virtual clinical trials and drug testing. We also expect to see increased use of AI for automating complex tasks, such as drug formulation and manufacturing. The rise of AI-driven drug delivery systems will enhance treatment effectiveness. Furthermore, the focus will shift towards developing more explainable AI models, enhancing trust and transparency in AI-driven decisions. The use of AI for improving drug safety monitoring will increase. We will also see increased focus on AI for accelerating rare disease research.

### Key Insights Ai In Pharma Market

**AI-Driven Drug Discovery:** Machine learning identifies novel drug targets and biomarkers.

**Clinical Trial Optimization:** AI improves trial design and patient recruitment.

**Personalized Medicine:** AI enables tailored therapies based on individual patient data.

**Drug Repurposing:** AI identifies new uses for existing drugs.

**Generative AI Drug Design:** AI creates new molecular structures for drug candidates.

**Need for Faster Drug Development:** AI accelerates the discovery and development process.

**Demand for Personalized Treatments:** AI enables tailored therapies based on patient data.

**Advancements in AI Technology:** Improvements in machine learning and deep learning.

Increasing R&D Costs: AI reduces costs and improves efficiency.

Data Privacy and Regulatory Compliance: Handling sensitive patient data and meeting regulatory requirements.

## Ai In Pharma Market Segmentation

### By Technology

Context-Aware Processing

Natural Language Processing

Querying Method

Deep Learning

### By Drug Type

Small Molecule

Large Molecules

### By Application

Diagnosis

Clinical Trial Research

Drug Discovery

Research And Development

Epidemic Prediction

## Key Companies Analysed

Concerto HealthAI

Alphabet Inc.

OWKIN

Nvidia Corporation

PathAI

Insilico Medicine

Exscientia

Microsoft Corporation

XtalPi

Intel

Standigm

Takeda Pharmaceutical Company Ltd.

Otsuka Pharmaceutical Co. Ltd.

China National Pharmaceutical Group Co. Ltd. (Sinopharm)

Jiangsu Hengrui Medicine Co. Ltd

Cipla Limited

Aurobindo Pharma Limited

Dr. Reddy's Laboratories Ltd.

Sun Pharma

Alliance Pharm Pte Ltd.

Shanghai Pharmaceuticals

DeepMind

GlaxoSmithKline

Sanofi

Bayer

Renalytix AI

Merck

AstraZeneca

Iktos

Benevolent AI

Novartis

Ardigen

Botkin

Webiomed

Care Mentor AI

Diagnocat

IBM Corporation

Atomwise Inc.

Cloud Pharmaceuticals

Bioage

NuMedii

Envisagenics

Aria Pharmaceuticals

Verge Genomics

Berg LLC

Cyclica

IQVIA

Roche

Pfizer

PRA Health Science

Gesto

Intensicare

Epitrack

Deep Genomics Inc.

Welltok Inc.

Oncora Medical

Recursion Pharmaceuticals Inc.

Nucleai

Pepticom

Rology

hearX Group

DilenyTech

iNNOHEALTH Technology Solutions

### Ai In Pharma Market Analytics

The report employs rigorous tools, including Porter's Five Forces, value chain mapping, and scenario-based modeling, to assess supply–demand dynamics. Cross-sector influences from parent, derived, and substitute markets are evaluated to identify risks and opportunities. Trade and pricing analytics provide an up-to-date view of international flows, including leading exporters, importers, and regional price trends.

Macroeconomic indicators, policy frameworks such as carbon pricing and energy security strategies, and evolving consumer behavior are considered in forecasting scenarios. Recent deal flows, partnerships, and technology innovations are incorporated to assess their impact on future market performance.

### Ai In Pharma Market Competitive Intelligence

The competitive landscape is mapped through OG Analysis' proprietary frameworks, profiling leading companies with details on business models, product portfolios, financial performance, and strategic initiatives. Key developments such as mergers & acquisitions, technology collaborations, investment inflows, and regional expansions are analyzed for their competitive impact. The report also identifies emerging players and innovative startups contributing to market disruption.

Regional insights highlight the most promising investment destinations, regulatory landscapes, and evolving partnerships across energy and industrial corridors.

### Countries Covered

## North America — Ai In Pharma market data and outlook to 2034

United States

Canada

Mexico

## Europe — Ai In Pharma market data and outlook to 2034

Germany

United Kingdom

France

Italy

Spain

BeNeLux

Russia

Sweden

## Asia-Pacific — Ai In Pharma market data and outlook to 2034

China

Japan

India

South Korea

Australia

Indonesia

Malaysia

Vietnam

Middle East and Africa — Ai In Pharma market data and outlook to 2034

Saudi Arabia

South Africa

Iran

UAE

Egypt

South and Central America — Ai In Pharma market data and outlook to 2034

Brazil

Argentina

Chile

Peru

*\* We can include data and analysis of additional countries on demand.*

## Research Methodology

This study combines primary inputs from industry experts across the Ai In Pharma value chain with secondary data from associations, government publications, trade databases, and company disclosures. Proprietary modeling techniques, including data triangulation, statistical correlation, and scenario planning, are applied to deliver reliable market sizing and forecasting.

## Key Questions Addressed

*Ai In Pharma Market Outlook 2025-2034: Market Share, and Growth Analysis By Technology (Context-Aware Processi...*

What is the current and forecast market size of the Ai In Pharma industry at global, regional, and country levels?

Which types, applications, and technologies present the highest growth potential?

How are supply chains adapting to geopolitical and economic shocks?

What role do policy frameworks, trade flows, and sustainability targets play in shaping demand?

Who are the leading players, and how are their strategies evolving in the face of global uncertainty?

Which regional “hotspots” and customer segments will outpace the market, and what go-to-market and partnership models best support entry and expansion?

Where are the most investable opportunities—across technology roadmaps, sustainability-linked innovation, and M&A—and what is the best segment to invest over the next 3–5 years?

## Your Key Takeaways from the Ai In Pharma Market Report

Global Ai In Pharma market size and growth projections (CAGR), 2024-2034

Impact of Russia-Ukraine, Israel-Palestine, and Hamas conflicts on Ai In Pharma trade, costs, and supply chains

Ai In Pharma market size, share, and outlook across 5 regions and 27 countries, 2023-2034

Ai In Pharma market size, CAGR, and market share of key products, applications, and end-user verticals, 2023-2034

Short- and long-term Ai In Pharma market trends, drivers, restraints, and opportunities

Porter’s Five Forces analysis, technological developments, and Ai In Pharma

supply chain analysis

Ai In Pharma trade analysis, Ai In Pharma market price analysis, and Ai In Pharma supply/demand dynamics

Profiles of 5 leading companies—overview, key strategies, financials, and products

Latest Ai In Pharma market news and developments

### Additional Support

With the purchase of this report, you will receive

An updated PDF report and an MS Excel data workbook containing all market tables and figures for easy analysis.

7-day post-sale analyst support for clarifications and in-scope supplementary data, ensuring the deliverable aligns precisely with your requirements.

Complimentary report update to incorporate the latest available data and the impact of recent market developments.

*\* The updated report will be delivered within 3 working days*

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