Innominds
Powering the Digital Next

How AI is Powering the Digital Next Initiatives in Healthcare & Medtech Organizations

COVID-19 pandemic has put unprecedented pressure on the healthcare system across the world. The road to full recovery for hospitals, health systems, and healthcare staff is likely to be a long one, making it critically important to find ways we can ease pressure in the future.

Artificial intelligence (AI) technology like machine learning (ML) and natural language processing (NLP) shows great promise – with the ability to enable better collaboration and experiences for healthcare organizations, clinicians, and their patients.

> AI-as-a-service to gain momentum further in 2020. AI in the healthcare market is expected to grow at a CAGR of **50.2% by 2025**.
>
> — Forbes

AI, autonomous AI and the Internet of Things (IoT) devices are increasingly driving the much-needed change in healthcare delivery making it efficient, reducing costs, improving patient experience and outcomes.

Intelligent automation coupled with smart algorithms is enabling health tech companies to empower health care providers to predict, prevent, and treat diseases with maximum accuracy.

Smart sensors, Natural-language processing (NLP) tools and Machine Learning systems have the potential to streamline hospital processes while accelerating the time to patient attendance.

Common Challenges the Healthcare Industry is Facing Today

Increase in Healthcare Cost

As people strive to live longer and healthier with an active lifestyle, healthcare concerns increase and so do the costs associated with it.

Changing Demographics

Human services or healthcare services are evolving drastically to meet the rise in patient needs, annually.

Ability to Encounter Customer & Efficiency

Patients have become more conscious about their healthcare needs owing to the awareness through various social media channels.

Provide Better Customer Experience

Healthcare companies are now investing in building mobile apps where they could photograph their time card or transcribe the information digitally.

AI-Powered Remote Patient Monitoring (RPM) has the Potential to:

Reduce readmissions by	Reduce emergency room visits by	Improve patient satisfaction by	Cut costs of care by
38%	**25%**	**28%**	**17%**

Four Big Ways AI-Enabled Tech will Drive Healthcare

Forward Long after the Pandemic is Over

1

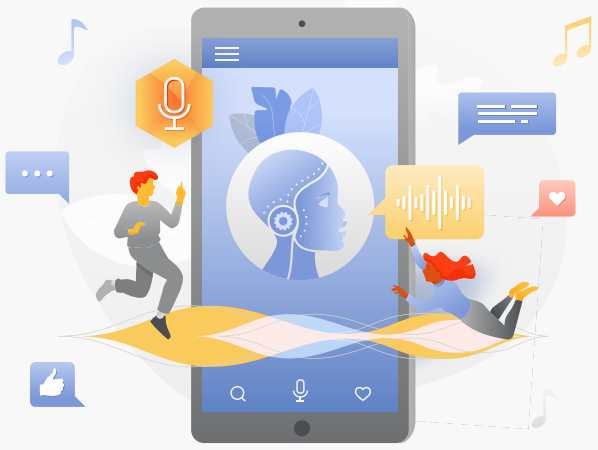
Automating processes, improving efficiencies

AI-powered RPM helps to keep people healthy in an automated fashion. Clinicians can stay close to their patients virtually and monitor certain conditions without the need for in-person visits.

2

Predicting risks and suggesting interventions

A second future-forward tech worth keeping an eye on is data- and ML-backed syndromic surveillance. ML uses algorithms to break down data, learn from it and then decide or predict.



3

Revealing patterns in disease

Another type of AI that's poised to revolutionize the healthcare industry is NLP technology. NLP enables computers to understand, interpret and manipulate human language.

4

Empowering patients to proactively manage their health

AI can convert personal health data into clinically useful information, empowering patients to be more engaged with and proactive about their health conditions. The data can be transmitted back to a hospital or physician's office.

Implementation of healthcare AI is expected to grow at an annual growth rate of 41.4% from 2020 to reach **$51.3 billion** by 2027.

Innominds' AI/ML-powered data analytics services help businesses operate and accelerate better through this pandemic.

iFusion™ can provide visual insights and information regarding the spread of the disease, confirmed cases, deaths, test results, contact tracing, monitored lockdown area clusters, etc.

How Healthcare Institutions Can Become Remote First with Innominds AI Solutions

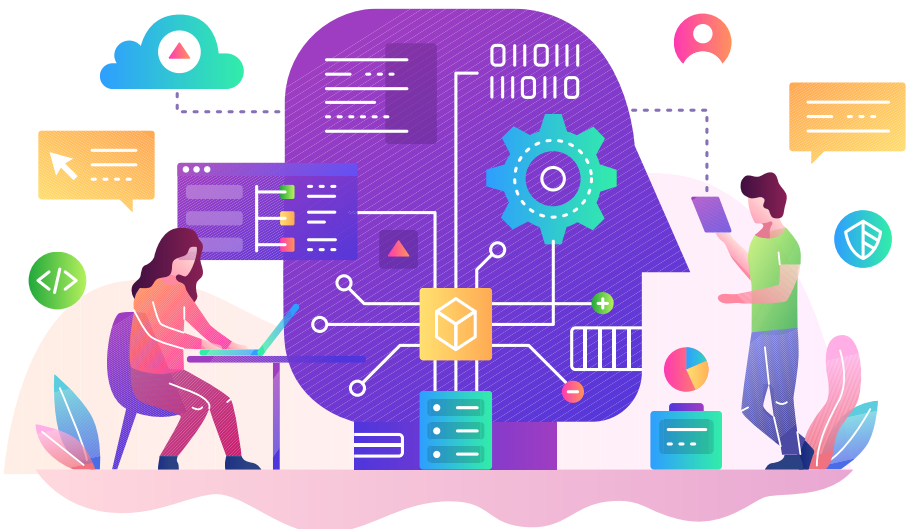
AI-powered data analytics platforms, like our AI/ML-powered iFusion™ analytics platform, can process millions of data records, coming from varied sources, trace out patterns, detect anomalies.

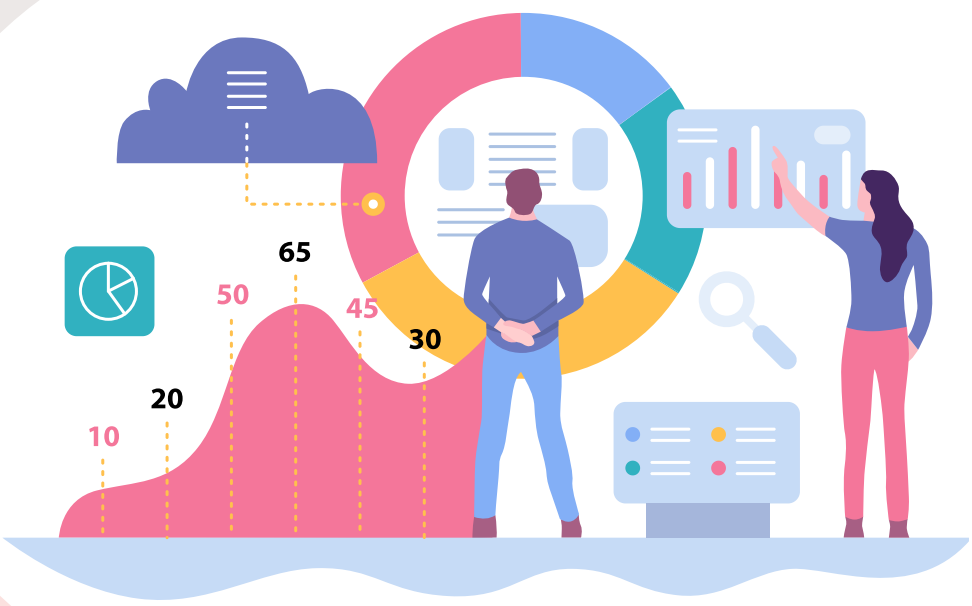
Our AI Test automation can help reduce the diagnostics and testing workloads and free up valuable resources to focus on treating.

But there are Certain Barriers to AI Implementation

Moving applications to production

Unlike software deployment, deploying a machine learning model does not end with copying code and provisioning infrastructure. While putting a single machine learning model into production comes with this level of complexity, imagine the same for a hundred use cases and models.





Data volume and complexity

Getting large volumes along with different types of data from multiple sources into the platform and making it ready for analysis is extremely challenging. It's difficult to determine the right configuration of hardware and software to meet compute, storage, analysis, networking, and software integration requirements.

Conversational AI in Healthcare:

4 Key Use Cases

1

Provide medical information

A Conversational AI assistant can answer common queries and FAQs related to a particular disease, health condition, or epidemic. It can raise awareness about a specific health-related concern or crisis by offering swift access to accurate, reliable, and timely information.

2

Schedule medical appointments

AI assistants are integrated into the medical facility system to extract information about suitable physicians, available slots, and clinics, and pharmacy working days. AI assistants or Chatbots ask patients about their current health issues, find matching physicians and dentists, provide available time slots.

3

Collect patient data

AI assistants can extract patient information using simple questions about name, address, symptoms, current doctor, and insurance details. They then store this information in the medical facility system to facilitate patient admission, symptom tracking, doctor-patient communication, and medical record keeping.

4

Handle insurance inquiries

AI assistants can provide insurance services and healthcare resources to patients and plan members. Moreover, integrating RPA or other automation solutions with chatbots allows automating insurance claim processing and healthcare billing.

Leverage our Big Data Analytics and iFusion™ platform for healthcare

iFusion™ is a highly scalable and distributed platform comprised of patented Big Data technology and powerful out-of-the-box analytics algorithms all pre-integrated to meet the needs of specific use cases.

iFusion™ collects poly-structured data from heterogeneous sources, cleans data, and makes the data ready for Data Analysts and Data Scientists to accelerate insights and to build solutions at a reduced cost.

iFusion™ Analytics comes with a rich set of accelerators and components for collecting, processing, storing, reporting, monitoring, correlating, and analyzing customer data either by itself or in combination with other enterprise or external data.

iFusion™ comes with ease of setup and operations enabled with self-learning and at scale. It allows full lifecycle AI management from data exploration to modeling to production addressing maintainability, scalability, and governance challenges - DataOps, MLOps, ModelOps, and Edge Analytics.

Why Healthcare Need iFusion™ Platform

The growing complexities of data are forcing healthcare service providers and medical technology companies to embrace analytics solutions for value-driven decision-making.

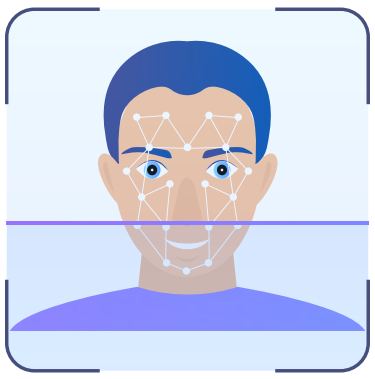
Dealing with healthcare data is difficult as it involves multiple sources ranging from electronic health records to monitor real-time vital signs and must comply with government regulations.

iFusion™, with its rich medical imaging analytics and anomaly detection capabilities, solves critical healthcare data problems and empowers stakeholders with reliable and actionable intelligence.

iFusion™ Healthcare

Case Studies

Case Study: 1



A novel, cost-effective pain assessment tool that detects facial expressions using iFusion™

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iFusion™ platform was used to

- Enable doctors to provide better treatment by calculating a pain severity score, and analysis and visualizations of patient's pain history
- Help patients with access to care from anywhere by building a single point of care app

Case Study: 2

Tactile imaging medical device solution for effective detection of breast cancer using iFusion™

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iFusion™ platform was used to

- Detect the hardness of the tissue in comparison to surrounding tissue using core tactile imaging algorithms
- Build an edge analytics solution to equip patients with immediate, objective, and digitized results

References:

https://www.hcinnovationgroup.com/analytics-ai/artifical-intelligence-machine-learning/article/21223186/beyond-covid19-four-ways-ai-is-shaping-the-future-of-healthcare

https://tss-yonder.com/transforming-healthcare-remote-patient-monitoring-rpm/

https://www.haptik.ai/blog/conversational-ai-healthcare-use-cases/

Learn more about how iFusion™ platform drives Autonomous AI for the enterprise and derives maximum value for the business. We can help you become successfully Remote First.

Write to us for a demo of our AI capability marketing@innominds.com

About Innominds

Innominds is an AI-first, platform-led digital transformation and full-cycle product engineering services company headquartered in San Jose, CA.

www.innominds.com

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