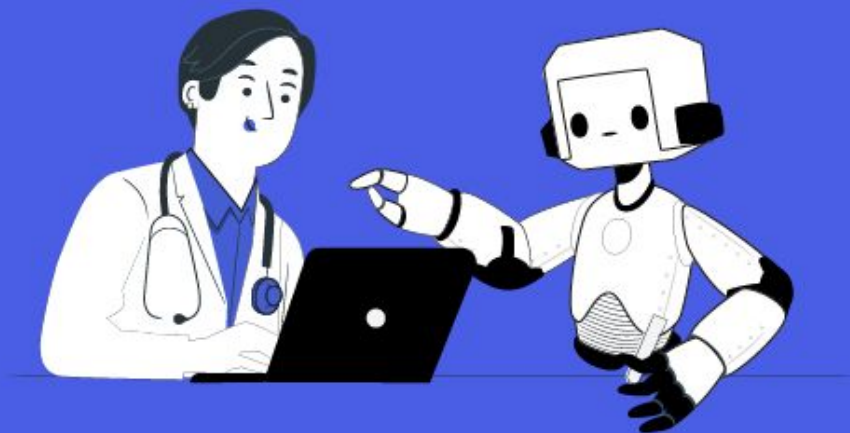


Artificial Intelligence x Healthcare



(The most important collaboration ever?)

AI in healthcare is more than just a buzzword. It's a groundbreaking fusion of technology and medicine.

This thriving industry is set to exceed \$90 billion by 2025*. Today, we take a quick look at how AI has influenced health care and what's on the horizon.



* Source: <https://markets.businessinsider.com/news/stocks/ai-market-outlook-90-billion-industry-2025-chatgpt-artificial-intelligence-2023-2>

How AI Shaped Healthcare So Far

From X-rays to antibiotics, technology has been pivotal in shaping medical progress.

In the past, AI algorithms were explored in the 1950s designed to mimic human thinking.

Today, and those initial tools have evolved into powerful tools that can diagnose illnesses, predict diseases, and even aid in drug discovery.



Tech and Health

Wearable tech has evolved beyond a mere accessory, becoming a personalized health companion capable of monitoring vital signs.

Health analytics has assumed a central role, employing algorithms to navigate complex data patterns and tailor healthcare solutions.

*(tools designed to enhance human psychological well-being, cognitive function and physical capabilities)



Tech and Health

Last Decade	Current Decade	Next Decade
Medical Products Equipment, Hardware, Consumables	Medical Platforms Wearable Tech, Big Data, Health Analytics	Medical Solutions Robotics, AI, Augmented Reality
Differentiation is solely through product innovation. Focused on historic and evidenced based care.	Differentiation by providing services. Focused on real-time outcome based care.	Differentiation by intelligent solutions for evidence/outcome based health. Focused on preventive care.

* Source: Frost & Sullivan "Transforming Health care through Intelligence; 2016

Current AI Trends

The past decade has seen an explosion in the amount of health data that is now available to us.

These are some example of trends using this data with to transform healthcare.



1. Electronic Health Records (EHR)

EHRs help standardize communication among healthcare data systems by consolidating all patient information in one digital location.

This enhances patient safety, saves time, and empowers individuals with access to their health data.

An example use case is FHIR (Fast Healthcare Interoperability Resources) as a common protocol, it is able facilitate legacy healthcare systems to communicate with each other to easily provide information to medical providers and individuals.



2.Diagnosis Prediction

AI's role in predicting diseases represents a significant shift from traditional diagnostic approaches.

Models developed by institutions like IBM Watson showcase enhanced accuracy in identifying ailments at their earliest stages. Google's DeepMind developed an AI system that assists human doctors in diagnosing eye diseases from scans.

The focus here is not just on prediction but on proactive healthcare, intervening before issues escalate.

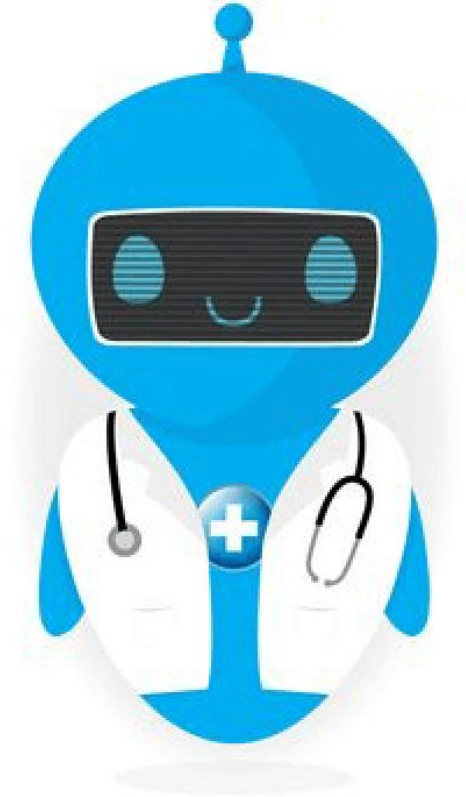


3. Telemedicine

Telemedicine, driven by AI, has the ability to overcome geographical constraints.

AI-powered chatbots, exemplified by Babylon Health, are redefining the dynamics of medical consultations and remote healthcare has evolved from an auxiliary service to an integral component of healthcare accessibility.

For example, Woebot use AI to provide mental health support, acting as virtual therapists. They are accessible 24/7 and have proven helpful in treating anxiety and depression.



Why AI and Healthcare Matters

Personalization

Individualized treatment plans based on genetic and health data are made possible through AI. Tailoring healthcare to the unique characteristics of each patient enhances treatment efficacy and minimizes adverse effects.

Efficiency

AI optimizes healthcare workflows. From streamlining administrative tasks to facilitating faster data-driven decision-making by medical professionals, the integration of AI enhances overall system efficiency.

Predictive

Predictive analytics, a forte of AI, enables forecasting disease outbreaks and understanding population health trends. This foresight aids in resource allocation, ensuring timely responses to emerging health challenges.

The Challenges

The transition demands not only technological adaptation but also a cultural shift within the medical community. Trust and acceptance of AI as a supportive tool rather than a replacement are pivotal.

Additionally, robust data privacy protocols are essential to secure patient information and maintain the integrity of healthcare systems.



AI Ethics and Responsibility

The background is a dark blue grid. Overlaid on the grid are several semi-transparent elements: a large stylized eye in the upper right, a hand with a red line graph on its fingers in the lower right, and a red waveform in the center. There are also some abstract shapes and colors like purple and green.

The ethical considerations of AI in healthcare is a big discussion point. Patient privacy is a paramount concern, necessitating stringent data protection measures.

Recently, the EU has passed regulations on how AI can be used, providing different regulation on risk levels, with health care being a high risk area.

Thank you.