

Artificial Intelligence in Medicine: Impacts, Applications and Benefits

By Luqman Lawal, Nov 25, 2023

[Artificial intelligence](#) (AI) in medicine is the active use of machine learning models to search medical data and uncover insights to help improve health outcomes and inpatient experiences. AI is becoming an important part of the new era of healthcare. Clinical decision support and image analytics are the two common applications of machine learning in the healthcare industry.



Image Source: Upslash.com

Clinical decision support provides medical practitioners with design treatments, mental health, and medications based on outcomes. As seen in medical imaging, it offers help for MRIs, X-rays, analysis of CT scans, and other lesion images a radiologist might be missing.

With the advent of [the COVID-19 pandemic](#), many health systems and organisations decided to integrate AI-enabled technologies like algorithms designed to monitor patients and analyse patients with coronavirus. Although the results and research of these tests are still being gathered, the overall standards for AI use in medicine are still defined.

But, AI benefits to researchers, clinicians, and patients they assist are increasing. At the moment, little doubt is possible with AI becoming an integral part of the digital health systems that will support and turn-around modern medicine.

Applications of AI to Medicine

With AI, the medical sector has seen many positive changes such as enhancing research or improving decision-making.

Below are ways AI has shaped the medical sector;

1. **Clinical trial efficiency:**

AI can speed up clinical trials in a quick time by providing an immediate search for medical codes assigned to patient outcomes. [According to IBM](#), AI can reduce the number of medical code searches by more than 70%.

2. **Personalised treatment design:**

Since AI uses model languages, it can learn and store references, offering great potential for personalised treatments in real time.

With the use of AI, healthcare industries can provide 24-hour access support to patients using virtual assistants.

3. **Disease detection and diagnosis:**

Unlike humans, AI is never tired. It can be used to observe and detect several patients' symptoms and provide necessary information to the doctor should the risks increase. Machine Also, it collects vital data from already-used medical devices (like heart monitors) and finds more complex conditions.

4. **Medical Imaging:**

Playing an important role in medical imaging, AI-powered artificial neural networks can be as effective as human radiologists in detecting some early signs of breast cancer and other medical conditions. Also, apart from detecting early signs of disease, AI can make use of a large number of medical images to detect important information about a patient's history and provide relevant images to them.

5. **Accelerate drug development:**

With the use of AI in medicine, there is a reduction in the cost of designing and developing new drugs because of two factors. One, it improves drug design and determines possible drug combinations. Two, it addresses many challenges Big Data poses to the life science industry.

Benefits of AI to Medicine

- Informed patient care
- Reduction in costs
- Less or no error
- Increase in doctor-to-patient engagement
- Providing contextual relevance