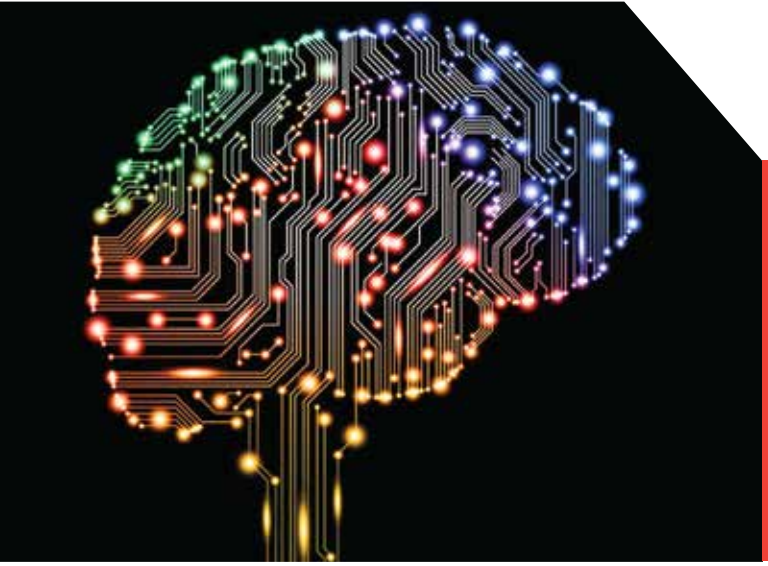

Artificial Intelligence and Machine Learning Gaining Momentum in Healthcare

While robots and computers will probably never replace doctors and nurses, machine learning, deep learning and AI are transforming the healthcare industry, improving outcomes, and changing the way doctors think about providing care. They are improving diagnostics, predicting outcomes, and just beginning to leverage personalized healthcare care.

On a basic level, artificial intelligence can be defined as the ability of a computer to independently solve problems that they have not been explicitly programmed to address. Machine learning algorithms on the other hand, drive a computer's "thoughts" by providing a conceptual framework for processing input and making decisions based on that data.

Industry analysts IDC predict that 30 percent of healthcare providers will use cognitive analytics with patient data by 2018. It is already happening and the implications have far reaching consequences.

Ethical concerns including privacy issues are likely to be a major factor for the development of AI and machine learning for healthcare, due to the highly sensitive nature of patient data and the wide array of applications of the insights that may come out of machine learning algorithms.

Companies like GAVS that offer healthcare services, are focused on accountability, quality outcome, and affordability in the healthcare domain.Having extensive capabilities in healthcare technology and a global resource base, they help clients to innovate by leveraging new technologies that enhance patient care and management.

Artificial intelligence and Machine Learning at Work

An artificial intelligent machine should be able to accept information about the problem from its surroundings, generate a list of actions that it could take, and maximize its chance of achieving its goals by using logic and probability to choose the activities with the highest probability of success.

The learning happens when the program assimilates its past experiences and uses that data to inform future actions. Doing this allows the machine learning &AI program to prioritize the choices that result in a high success rate.

Typical use cases for AI and Machine learning

The broad applications for AI and machine learning in the healthcare domain are in delivering an accurate diagnosis, individual treatment, and follow up after successful treatment.

As healthcare becomes more consumer-focused due to rising costs and an emphasis on patient-centered care, healthcare providers are searching for new ways to engage and manage patients without increasing their clinical workload.

Effective diagnosis

The healthcare infrastructure is focused on developing new programs for imaging and diagnostics, which facilitates introducing machine learning as computers and deep learning algorithms are getting increasingly adept at recognizing patterns, that is the core of diagnostics.

Companies are involved in developing simple blood tests to determine if early detection or prediction of certain cancers is possible. Another uses predictive analytics tools that can discover accurate insights and make predictions related to symptoms, diagnoses, procedures, and medications for individual patients or patient groups.

Develop treatmentplans

Companies involved in healthcare services are helping the doctors develop the best approach for patient care and understand the protocols and guidelines involved in devising this plan.Their unique approach allows teams to first draw up a guideline for the treatment plan for different type of patients. It then helps doctors choose the right treatment plan for an individual patient.

AI is used on trial basis for designing treatment plans or options for doctors and physicians. It's advanced capabilities to analyze the meaning and context of structured and unstructured data in clinical notes and reports that may be critical to selecting a treatment pathway. Combined with the patient's records with the clinical expertise and external medical research, AI will identify potential treatment plans for a patient.

Mining medical records

Existing healthcare systems are dealing with the three V's - defining properties of Big Data - velocity, volume, and variety of data. Volume refers to the amount of data, variety refers to the number of types of data and velocity refers to the speed of data processing.

The most obvious application of artificial intelligence in healthcare is in data management. Collecting, storing, normalizing, and tracing its origin – it is the first step in transforming the existing healthcare systems. Mining the medical records provides better and faster health services.

Assist in performing repetitive jobs

AI is predominantly used to help in clinical assistance for decision making in areas like cardiology and radiology. It can perform as cognitive assistant for medical jobs that require analytical, reasoning capabilities and a wide range of clinical knowledge. It can analyze the images to accurately spot and detect anomalies faster, and more reliably.

Follow up care

The use cases for AI and ML doesn't stop with diagnosis or treatment.Doctors are increasingly using healthcare infrastructure such as mobile technology, natural language processing to help patients with their follow up care. Various apps help patients devise their own fitness plansto meet their health targets using alerts and notifications.

As thehealthcare infrastructure technologies develop, new and improved treatments and diagnoses will save more lives and cure more diseases. The future of medicine is based in data and analytics.

About GAVS

GAVS Technologies (GAVS) is a global IT services & solutions provider enabling digital transformation through automation-led IT infrastructure solutions. Our offerings are powered by Smart Machines, DevOps & Predictive Analytics and aligned to improve user experience by 10X and reduce resource utilization by 40%.

For more information on how GAVS can help solve your business problems, write to inquiry@gavstech.com
www.gavstech.com

GAVS