How Different Types of AI are Applied in Healthcare

Examples of artificial intelligence have been around **since the 1950s**, but adoption in healthcare didn't accelerate until the 2000s. As the technology advanced, many subfields – not unlike medical subspecialities – have emerged.[1]

Types of Artificial Intelligence Used in Healthcare

Computer vision (CV)

The process by which a **computer gains information and understanding from images and videos.**[2] In some advanced forms of CV, there are deep learning capabilities that can recognize, interpret and categorize images.

Healthcare examples: Medical imaging analysis and facial recognition patient identification software.

Deep learning (DL)

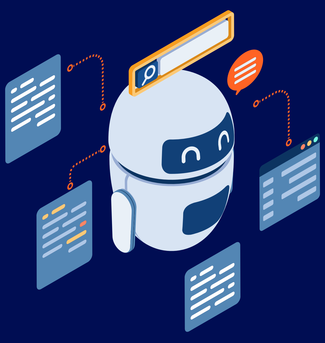
A more complex form of machine learning that uses deep neural networks[2] **for advanced and more sophisticated use cases.**

Healthcare examples: Algorithms that help improve patient care and clinical outcomes through rapid triage and clinician notification.

Generative artificial intelligence

This type of machine learning **trains various algorithms in order to produce a variety of outputs from a single inquiry.**[3] The most well-known example is Open AI's ChatGPT, which has been shown to write summaries or answer questions with lifelike accuracy.

Healthcare examples: Tools are still in development, but possible use cases could be correspondence and documentation.



Machine learning (ML)

One of the most common and broad applications of AI,[4] ML uses pattern-based identification that **allows a machine to learn and, overtime, apply that experience to similar scenarios**.

Healthcare examples: Chatbots for billing and scheduling or filtering and organizing data within a medical device, such as an MRI or CT scanner.

Natural language processing (NLP)

Allows computers to **pull data from human language and make decisions based on that information.**[5]

Healthcare examples: Transcribing clinical notes or dictation software.[6]

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