**Latest advancement in the Field of AI**

In the last five years, AI has made major advancements in certain fields of speech recognition, image and video generation, medical diagnosis, games, language translation, etc. The core technology for all these advancements is Machine Learning.

**LANGUAGE PROCESSING TRANSLATION**

It has made a huge advancement in the last five years. Language processing translation refers to the branch of computer science or more specifically, the branch of artificial intelligence giving the computers ability to understand text and spoken words in the same way human beings can.

It translates text from one language to another, responds to spoken commands, and summarizes large volumes of text rapidly even in real-time. There’s a good chance you’ve interacted with NLP (Natural language processing) in the form of voice-operated GPS systems, digital assistants, speech-to-text dictation software, [customer service chatbots](https://www.ibm.com/products/watsonx-assistant/customer-service), and other consumer conveniences.

But NLP also plays a growing role in enterprise solutions that help streamline business operations, increase employee productivity, and simplify mission-critical business processes.

**COMPUTER VISION AND IMAGE PROCESSING**

Image-processing technology is now widespread, finding uses ranging from video-conference backgrounds to photo-realistic images. Many image-processing approaches use deep learning for recognition, classification, conversion, and other tasks. Computer vision is a field of artificial intelligence (AI) that enables computers and systems to derive meaningful information from digital images, videos, and other visual inputs — and take actions or make recommendations based on that information. If AI enables computers to think, computer vision enables them to see, observe, and understand.

Image processing is the process of transforming an image into a digital form and performing certain operations to get some useful information from it. The image processing system usually treats all images as 2D signals. Some of the applications of image processing are:-

1. Medical image retrieval
2. Traffic sensing technology
3. Image reconstruction
4. Face detection

**GAMES**

AI has impacted the gaming industry since the early days of game development. While initially focused on creating game-playing programs that could defeat human experts in strategy games, AI has since been applied to a wide range of areas in game development.

Today, game developers use AI to enhance various aspects of game design and development, such as improving photorealistic effects, and generating game content. Artificial Intelligence can now create more realistic game environments, analyze the players' behavior and preferences, and adjust the game mechanics accordingly, providing players with more engaging and interactive experiences.

**HEALTH**

Artificial Intelligence has made an unprecedented impact in the healthcare sector and hence changed the face of the medical industry. Various machine learning algorithms and models have efficiently predicted various important use cases, such as determining whether a particular patient has cancer or a tumor based on symptoms, health records, and history. It is also being used in future predictions where patients are well informed about their deteriorating health and what they should do to return to a normal and healthy life.

Artificial intelligence has created a virtual care private assistant specifically built for people's needs. It is widely used to monitor, research different types of cases, and analyze past cases and their outcomes. It also seeks to improve its model's and assistants' efficiency by predicting what could be improved and making themselves smarter.

The use of healthcare bots is another efficient move taken by the medical industry to work their way up in medicine, which is known to provide 24/7 assistance and take up the less important work of managing appointments.

**FINANCE**

Artificial Intelligence plays a vital role in managing financial transactions and handling many other activities in the bank. The day-to-day operations of banks, such as transactions and financial operations, stock market money and their management, etc., are being handled more easily and efficiently by these machine learning models.

Other use cases include credit systems analysis which is popular among credit card companies. Suspicious credit card transactions are tracked geographically and acted upon and resolved based on various parameters.

**AIR TRANSPORT**

One of the major systematic transport in the world is air transport, and there has become an urgent need to optimize their mode of operation. Here came the involvement of Artificial Intelligence, where the machine is involved in planning the routes along with the flight landing and take-off charts.

Artificial intelligence has been used in many aircraft, navigation maps, taxing routes, and a quick examination of the entire cockpit panel to ensure the correct operation of each component. Hence, it gives very promising results and is being adopted very frequently. The ultimate aim of artificial intelligence in air transport is to give easier and more comfortable travel to human beings.