

**ARTIFICIAL
INTELLIGENCE
&
MACHINE LEARNING**

DURING COVID-19

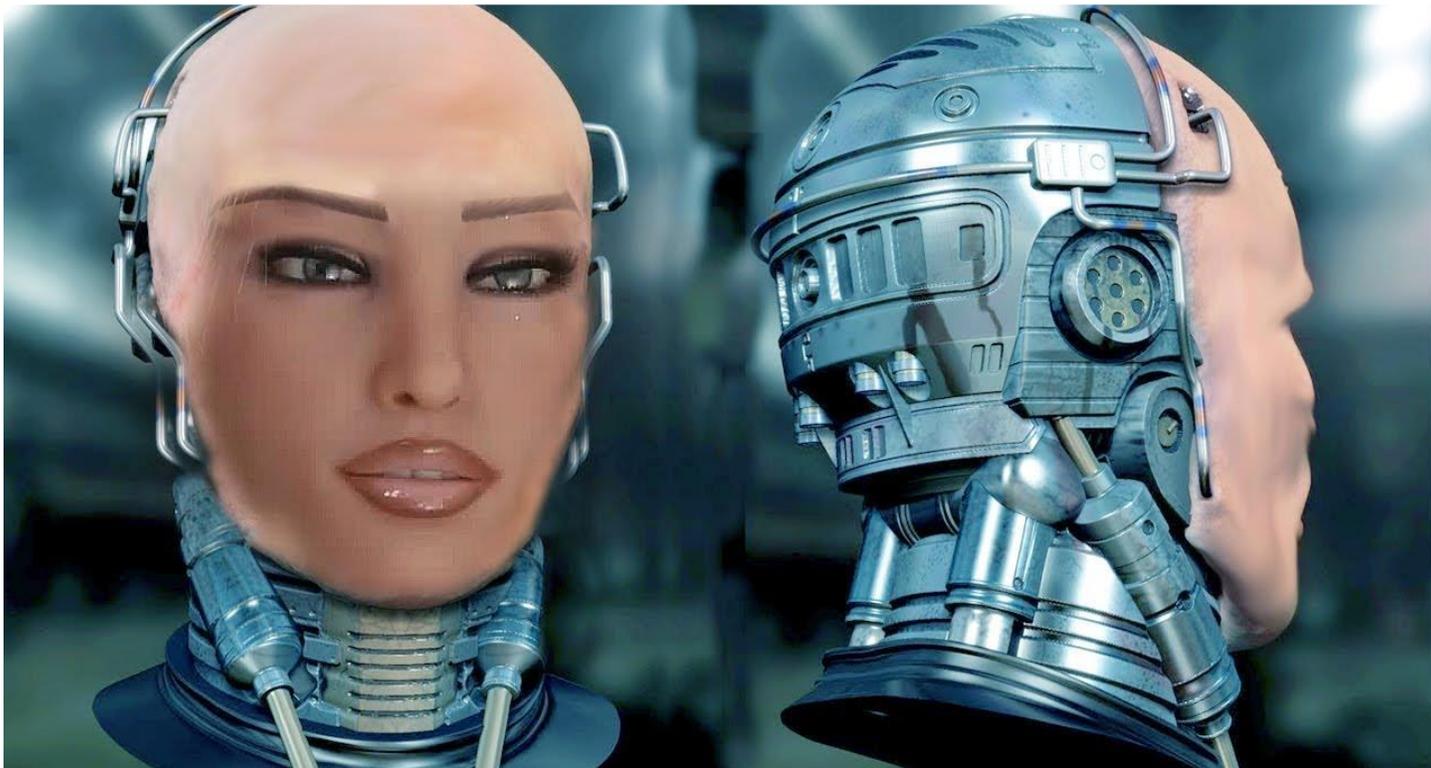


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INTRODUCTION

Artificial Intelligence (AI) and **Machine Learning (ML)** are the current buzzwords in the technology sector. They are not exactly same, but used synonymously by many. Both terms emerge around the subject: Analytics, Big Data or latest technological changes that are transforming our world.



AI (Artificial Intelligence), in a broader view is making machines capable of carrying out tasks in ‘smart’ moves. ML (Machine Learning) on the other hand, is an application of AI where machines can have access to data and are permitted to learn by themselves. Through ML and application of data, program can accomplish defined tasks.

At present, our world is going through its worst times, since World War 2. Dealing with Covid-19 pandemic is proving to be one of the most difficult and biggest crisis of all time. In India alone, this rapidly growing disease has already infected more than two lakh people.

In such a scenario, AI and ML can play a major role finding solutions to arising issues, strategically.

How? Let us look at some of the areas where AI and ML can be helpful

MONITORING SOCIAL DISTANCING AND DETECTING FACE MASKS

As per COVID-19 disease control agencies globally, wearing masks and maintaining social distance, are currently the best preventive measures against the fast spreading of COVID-19. Machine intervention can aid in ensuring these measures are practiced well.

In some Indian states, police are using AI, from facial recognition technology to CCTV camera-based system to track down people who are not wearing masks or are not adhering to social distancing advice in public places like streets, buses, trains or airports.

Public places like supermarket aisle may be congested and people may violate social distancing norms without even, realizing it. With the help of AI in such areas, aisle traffic can be changed in real times and hot spots can be identified. Products can be re-distributed to avoid crowding at one place and number of cashiers can be varied as well, to deal with long and slow waiting lines.

Customers can also benefit by learning about the least crowded time to shop, another example where run-time data can be processed and made available as useful information by AI. This helps in reducing chaos and improving convenience.

Similarly, face Masks can be detected via ML enabled CCTV cameras. Such cameras can be used by authorities, to help monitor places where wearing masks is highly recommended or mandatory.

All, in all, this can definitely play a good role in reducing the risk of Covid-19 contamination and providing convenience to customers and vendors.



MARKET ANALYSIS

AI and ML help to predict market trends in the future, like the potential for e-commerce and through this, several companies have seized fresh business opportunities in the Covid era. They provide valuable suggestions to customers, seeking essential products like sanitizers, gloves, shields, PPE kits etc. Likewise, its recommendation engine gives insights to customers on wide variety of other useful products such as hand washing soaps, facial masks, sanitizer machines, etc. Not only this, AI helps these companies to keep a track of inventory levels, maintain database about what all is in stock and identify if there are any shortages in supply chains, to cater to the special needs in these difficult times.



FORECASTING OF COVID

ML technology enables computers to mimic human intelligence and ingest large amounts of data to identify insights and patterns quickly. Using ML and AI, researchers are able to forecast projections of COVID-19 trends. A Google-owned machine learning community, Kaggle has set up several COVID-19 challenges to its members, such as forecasting number of fatalities and cases by cities and states to identify which areas will be worst hit.

The use of AI can be seen across countries, where special applications have been developed to provide statistical predictions in near future. Besides, broadcasting important updates in combating this virus, these ML driven apps are also tracking movement of affected Corona virus patients and raising alarms to others in their vicinity.

In India, Aarogya Setu is an open-source cross-platform CoVID-19 "Contact tracing, Syndrome mapping and Self-assessment" digital service, primarily a mobile app, developed by the National Informatics Centre under the Ministry of Electronics and Information Technology.





ASSISTANCE AT AIRPORTS

Airports are using AI and ML to combat risks of spreading Covid-19 starting from pre-entry processes like thermal screening of passengers and crew, and issue of a boarding pass by robots to facial recognition at self-service kiosks and check-in process. AI also helps set up a virtual help desk and Chatbot to guide travellers and to enhance logistics operations. In addition, tech experts are working on the automated alarm options for health screening at checkpoints. Such technologies reduce unnecessary interaction between passenger and operator, thereby reducing queue times and enhancing efficiency.



FOR HEALTHCARE

In the fight against COVID-19, AI offers a vital arsenal of weapons. In the health care sector, it permits predictions to be made about the spread of the virus, helps diagnose the cases fast and measures accurately the effectiveness of countermeasures.

AI helps in early detection & epidemic analysis, measures for containment, designing health care operations as well as R&D for making vaccines.



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