Artificial Intelligence and Data Science's in Overcoming COVID-19 Crisis

Coronavirus, now declared as pandemic, is causing widespread shutdown and chaos. With the rising numbers of cases every day, the situation is truly alarming.

The rapid spread and global impacts of COVID-19 can make people feel helpless and scared as the novel coronavirus escalates and forces them to change many aspects of their everyday lives.It is clear that the world needs a quick and safe solution right now to combat further spread of the coronavirus. What then is the best solution to this health crisis? This is where technologies such as Artificial Intelligence and Machine Learning come into play. Analytics have changed the way disease outbreaks are tracked and managed, hence saving lives. Predictive analytics and big data have become a powerful tool for combating deadly disease outbreaks such as coronavirus and SARS.

There is little doubt that the timely availability of reliable data is extremely important for the effective management of a pandemic such as Covid-19. If big data is combined with AI, it becomes a powerful tool that could assist in limiting the spread of a disease, as well as the mitigation of its consequences.

Data science is considered by clinicians and health practitioners to be more important than ever in overcoming the pandemic. Although it is important to maintain a perspective of data science as a decision support tool as opposed to a decision-making mechanism, the value of data science and artificial intelligence for decision support is being more openly accepted than ever before.

Data Scientists Devised a Speedier Way to Handle Contact Tracing. Contact tracing is an effective way to slow COVID-19. It involves getting in touch with a person's close contacts after that individual tests positive for the virus and telling them to self-isolate. Contact tracing is time-consuming, although it's getting easier as more people take social distancing seriously.

They created a mobile phone-based solution to eliminate the need for people to call the contacts manually. Instead, those parties get text messages confirming the need for self-isolation. People interact with the app to do a short daily symptom check-in. They also give their age and postal code, plus disclose any pre-existing conditions. That information helps scientists determine the groups that are most affected or at risk.

There are a number of silver-linings to the COVID-19 pandemic, ranging from increased confidence in data science to increased cross-disciplinary collaboration and the development of stronger cross-disciplinary networks that will benefit innovation beyond COVID-19.

AI is not only playing a major role in helping to track the outbreak of the virus, but also to develop a vaccine. Through a deep analysis of the care that every Covid-19 patient receives, AI further assists in determining the best treatment strategies. Here are six ways AI, Data Science, and technology are being used to manage and fight COVID-19.

- AI to identify, track and forecast outbreaks
- Drones deliver medical supplies
- Robots sterilize, deliver food and supplies and perform other tasks
- Developing drugs
- Chatbots to share information
- Supercomputers working on Coronavirus vaccine

AI remains a valuable tool to make sense of huge sets of data. When combined with the expert knowledge of humans, it can save human lives. In the current Covid-19 crisis, technology such as AI, machine learning and powerful algorithms, as well as human knowledge, creativity and innovation will all play a critical role in fighting and surviving the Covid-19 crisis.

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Colonel Inderjeet Singh is the Chief Cyber Security Officer and Head of the Cyber Security Center of Excellence at Vara Technology. In this role, he is instrumental in building the Cyber Security Business Unit for the Group. He is working on the disruptive technologies in the Cyber Security Space for securing IT networks, Smart cities and Critical Information Infrastructure.

He served in the Indian Defence Forces, is Alumnus of IIT Kharagpur and Symbiosis Institute of Management, Pune. He is an experienced Information Systems professional with experience of more than 27+ year across wide spectrum of areas spanning Information Security, Risk Management, Cyber Security, Cyber Forensics, Cyber Warfare, Cyber Terrorism, Expertise in SOC and CERT, Internet of Things (IoT) including IoT Security, Blockchain and Cryptonomics, Machine Learning and artificial Intelligence and Smart Cities.

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He is a Council Member of CET (I) and fellow of IETE, IE, Member CSI and Executive Council Member Society for Data Science, Member Information Systems Audit and Control Association (ISACA), IEE, ISOC,IOT for Smart Cities Task Force (IoT4SCTF),Cloud Computing Innovation Council of India (CCICI), Internet Engineering Task Force (IETF), USI and many other professional bodies.

He has been consistently been awarded while in Army and was awarded **"Magnificent CIO of the Year "Award in year 2016 and Excellence Award in Cyber Security by International Police Commission in 2019.**

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