Katkam A, J Appl Bioinforma Comput Biol 2021, 10:4

DOI: 10.37532/jabcb.2021.10(4).206

Journal of Applied Bioinformatics & Computational Biology

Perspective

A SCITECHNOL JOURNAL

An Overview of Mapping the Landscape of AI Applications Against SARS-Cov-2 Virus

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COVID-19, the sickness caused by the SARS-CoV-2 virus, has been declared an epidemic by the globe Health Organization, that has according over eighteen million confirmed cases as of August five, 2020. during this review, we have a tendency to gift an outline of recent studies exploitation Machine Learning and, a lot of generally, AI, to tackle several aspects of the COVID19 crisis. With the continued growth of the COVID-19 pandemic, researchers worldwide area unit working to higher perceive and suppress its unfold. Key areas of analysis embody studyingCOVID-19 transmission, facilitating its detection, developing doable vaccines and treatments, and understanding the socio-economic impacts of the pandemic. during this article, we discuss however AI (AI) will contribute to those goals by enhancing in progress [1]. When it involves medical imaging, associate degree AI model could perform bound tasks, like reading CT respiratory organ scans, faster and, given the correct knowledge to coach on, even a lot of accurately than a medical skilled. With this pandemic, fast medicine exploitation machine learning (ML) approaches may save lives. In many promising studies, AI models were trained to spot potential COVID-19 cases; others area unit combining ready-made code with custom machine learning approaches; others area unit employing a human-in-the-loop approach to cut back the time needed to label the sickness. All of those efforts area unit in associate degree inchoate section, however, the preliminary results area unit actually encouraging [2].

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Citation: *Katkam A (2021) An Overview of Mapping The Landscape of AI Applications Against SARS-Cov-2 Virus 10(4).206.*

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Received April 03, 2021 **Accepted:** April 17, 2021 **Published:** April 24, 2021

One such example is that the case of the abundant debated, and heavily advertised, antimalarial and anti-inflammatory drug – 2 medicine usually accustomed treat protozoal infection that have shown some promising results. aboard this, there area unit in progress efforts to find new medicine that may counter the sickness. As time is of the essence, AI systems, methods, and models will act as a compact style of data sharing that may be accustomed train alternative specialists and might be deployed wide. so as to facilitate the sharing of such knowledge, clinical protocols and knowledge sharing mechanisms can got to be designed and knowledge governance frameworks should be place in place [3].

Since ancient times, plants and herbal preparations have been used as medicine. Research carried out in last few decades has certified several such claims of use of several plants of traditional medicine. Popularity of *Momordica charantia* in various systems of traditional medicine for several ailments (antidiabetic, abortifacient, anthelmintic, contraceptive, dysmenorrhea, eczema, emmenagogue, antimalarial, galactagogue, gout, jaundice, abdominal pain, kidney (stone), laxative, leprosy) the investigator's attention on this plant. Over100 studies using modern techniques have authenticated its use in diabetes and its complications (nephropathy, cataract, insulin resistance), as antibacterial as well as antiviral agent (including HIV infection) [2].

As a member of the Nidovirus family, coronavirus infection (SARS-CoV- 2) can be contracted from animals such as bats,and fellow humans. This virus can enter the human body through its receptors, ACE2 which are found in various organs such as heart, lungs, kidneys, and gastrointestinal tract, thus facilitating viral entry into target cells. The process of CoV entering into the host cell beginsthrough the attachment of the S glycoprotein to the receptor, the ACE2in the host cells (such as in type II pneumocytes in the lungs). The entry and binding processes are then followed by fusion of the viral membrane and host cell. After fusion occurs, the type II transmembrane serine protease (TMPRSS2) that is present on the surface of the host cell will clear the ACE2 and activate the receptor- attached spike-like, S proteins. Activation of the S proteins leads to conformational changes and allows the virus to enter the cells. Both ofthese proteins (TMPRSS2 and ACE2) are the main determinants oftheentry of this virus [3].

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