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Forecasting Models for COVID-19 Pandemic: A Scoping Literature Review

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Forecasting Models for COVID-19 Pandemic: A Scoping Review

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ABSTRACT

The World Health Organization (WHO) has classified the outbreak of new corona virus 2019 (COVID-19) as a global public health emergency. The widespread impact of the COVID-19 pandemic on health-care systems necessitates the use of unique, alternative, and developing technologies to respond to the resulting disaster. In this regard, Artificial Intelligence (AI) techniques can provide valuable assistance to public health authorities by supplementing conventional methods with cutting-edge data science approaches. This paper offers a thorough analysis of methodologies, algorithms, applications, and new AI technologies that can be applied for forecasting and diagnosing COVID-19. The following is a synopsis of this review's primary objectives. Understanding the significance of AI approaches such as machine learning and deep learning for the COVID-19 pandemic; discussing the efficiency and impact of these methods for COVID-19 forecasting and diagnosis; providing a detailed background characterization of AI techniques to assist non-experts in grasping the fundamental concepts. For each surveyed work, provide a detailed analysis of the approach's rationale, showcasing the method used, the type and size of data analyzed, the validation method, the specific purpose, and the results obtained; and emphasizing some challenges ahead in COVID-19 forecasting and diagnosis.

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