

عنوان مقاله:

Artificial Intelligence Approaches on X-ray-oriented Images Process for Early Detection of COVID-۱۹

محل انتشار:

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خلاصه مقاله:

Background: COVID-۱۹ is a global public health problem that is crucially important to be diagnosed in the early stages. This study aimed to investigate the use of artificial intelligence (AI) to process X-ray-oriented images to diagnose COVID-۱۹ disease. Methods: A systematic search was conducted in Medline (through PubMed), Scopus, ISI Web of Science, Cochrane Library, and IEEE Xplore Digital Library to identify relevant studies published until ۲۱ September ۲۰۲۰. Results: We identified ۲۰۸ papers after duplicate removal and filtered them into ۶۰ citations based on inclusion and exclusion criteria. Direct results sufficiently indicated a noticeable increase in the number of published papers in July-۲۰۲۰. The most widely used datasets were, respectively, GitHub repository, hospital-oriented datasets, and Kaggle repository. The Keras library, Tensorflow, and Python had been also widely employed in articles. X-ray images were applied more in the selected articles. The most considerable value of accuracy, sensitivity, specificity, and Area under the ROC Curve was reported for ResNet۱۸ in reviewed techniques; all the mentioned indicators for this mentioned network were equal to one (۱۰۰%). Conclusion: This review revealed that the application of AI can accelerate the process of diagnosing COVID-۱۹, and these methods are effective for the identification of COVID-۱۹ cases exploiting Chest X-ray images

کلمات کلیدی:

nCoV disease, artificial intelligence, computed tomography, deep learning, image processing, X-ray images-۲۰۱۹

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