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| Sl No | Citation | Methodology | Dataset | Results | Merits and Demerits |
| 1 | Deep transfer learning-based automated detection of COVID-19  from lung CT scan slices  Sakshi Ahuja, Bijaya Ketan Panigrahi, Nilanjan Dey, Venkatesan Rajinikanth, Tapan Kumar Gandhi | Phase1- data augmentation using stationary wavelets, Phase2- COVID-19 detection using pre-trained CNN model and Phase3- abnormality localization in CT scan images | The dataset used is a database of CT scan images of lungs of COVID-19 positive patients and normal patients. The database contains 349 CT COVID19 positive CT images from 216 patients and 397 CT images of Non-COVID patients. The input CT images are available in different sizes and numerous image formats (JPEG, png). | The highest classification accuracy for training (99.82%) and validation (97.32%) is achieved with the **ResNet18** | Merits:   * Rapid and accurate detection of COVID-19 signature from   lungs CT scan slices   * Proposed system can be considered to examine the clinically obtained CT scan slices with COVID-19 infection   Demerits:   * Small dataset |
| 2 | Iteratively Pruned Deep Learning Ensembles for COVID-19 Detection in Chest X-Rays  Sivaramakrishnan Rajaraman, Jenifer Siegelman, Philip O. Alderson, Lucas S. Folio, Les R. Folio, Sameer K. Antani | A custom convolutional neural network and a selection of ImageNet pretrained models are trained and evaluated at patient-level on publicly available CXR collections to learn modality-specific feature representations. The learned knowledge is transferred and fine-tuned to improve performance  and generalization in the related task of classifying CXRs as normal, showing bacterial pneumonia, or  COVID-19-viral abnormalities. The best performing models are iteratively pruned to reduce complexity and  improve memory efficiency. The predictions of the best-performing pruned models are combined through different ensemble strategies to improve classification performance | 1. PEDIATRIC CXR DATASET 2. RSNA CXR DATASET 3. TWITTER COVID-19 CXR DATASET 4. MONTREAL COVID-19 CXR DATASET | an accuracy of 99.01% and area under the curve of 0.9972 in detecting COVID-19 findings on CXRs | Merits:   * The opportunity to utilize CXRs as part of the diagnostic approach could add an   important and nearly universally available tool to the battle against COVID-19 or other respiratory viruses that might emerge in the future  Demerits:   * Success of this approach is controlled by two broad factors: (i) dataset size and inherent variability, and (ii) computational resources needed for successful deployment and use |