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(57) Abstract :

The invention pertains to a Computer Aided Diagnosis System for Lung Diseases Detection using CT Images, designed to automate and enhance the diagnosis of various pulmonary conditions. Comprising several key modules, the system starts with an image preprocessing module that enhances and segments lung tissues from CT images, employing techniques such as noise reduction and contrast enhancement. A feature extraction module then identifies and extracts essential morphological properties related to lung pathology. The system further includes a classification and detection module that categorizes the extracted features into specific lung diseases, enabling precise detection and localization. Integration with Electronic Medical Records (EMR) and a user-friendly graphical interface for medical professionals add to the system's functionality. The invention emphasizes adaptability, scalability, and continuous learning, providing a comprehensive solution for early detection, standardized diagnosis, and efficient management of lung diseases across various healthcare environments. Accompanied Drawing [FIGS. 1-2]

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