

Lung Cancer Detection using Deep Neural Network

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Abstract: *Early diagnosis of lung cancer greatly increases patient survival rates. In order to detect lung cancer, this study presents a deep neural network (DNN) methodology for the simultaneous analysis of tabular data, including Excel-based datasets, and medical images. The model recognizes important elements from chest X-rays, CT scans, and patient data including age, smoking history, and clinical test results by combining feedforward networks for structured data and Convolutional Neural Networks (CNNs) for image processing. The hybrid method achieves excellent sensitivity and specificity by enabling thorough examination and accurate classification of lung anomalies. When compared to traditional models, the suggested framework performs better, indicating that it may find use in automated diagnostic systems. Our results demonstrate the effectiveness of integrating numerical and visual data for cancer detection.*

Keywords: Lung Cancer Detection, Deep Neural Networks, Convolutional Neural Networks (CNN), Medical Image, Image Processing, Chest X-rays, CT Scans, Excel Data, Health Data Analysis, Image Classification, Predictive Analytics, Cancer Risk Factors, Image Analysis