Lung cancer prediction using CNN

Ms. Pooja Patle

*Department of M.Tech. AIML*

*Tulsiramji Gaikwad Patil College of Engineering & Technology,Nagpur,Maharashtra,India 441108*

poojapatle40@gmail.com

***Abstract: Lung cancer remains a leading cause of mortality worldwide.*** ***Early and accurate diagnosis is crucial for improving patient outcomes. This paper proposes a lung cancer prediction system utilizing optimized Convolution Neural Networks (CNNs).It is essential to detect malignant states of cancer at the earliest possible stage by developing an automated tool. The prediction with accuracy becomes a challenge for researchers despite the many algorithms proposed in the past by different researchers. This study proposes the system which leverages the power of CNN in extracting intricate features from lung CT scans for robust classification of malignant and begin nodules and to detect abnormal lung tissue growth. It presents a novel architecture incorporating residual connections and batch normalization for enhanced learning efficiency and reduced over fitting.*** ***The system is trained and validated on a publicly available lung cancer image dataset. The results demonstrate promising performance, achieving high accuracy in differentiating lung cancer from benign nodules. This study suggests the potential of optimized CNN-based systems to become valuable tools for computer-aided diagnosis (CAD) of lung cancer, potentially aiding healthcare professionals and improving patient survival rates.***