

Title: Advances in Medical Imaging: Deep Learning Strategies for Pneumonia Identification in Chest X-rays

Author Names: Sadman Sadik Khan; Afraz Ul Haque Rupak; Washik Wali Faieaz; Sayma Jannat; Nuzhat Noor Islam Prova

Abstract: Pneumonia poses a widespread international fitness mission, in particular affecting prone populations which include youngsters and the elderly. Rapid and accurate analysis is crucial for powerful remedy and the prevention of severe outcomes. Chest X-rays (CXRs) are a fundamental diagnostic tool for pneumonia however decoding them may be time-eating and concern to variability. This paper introduces “Advances in Medical Imaging,” a unique deep mastering gadget designed to enhance pneumonia detection from CXRs using convolutional neural networks (CNNs). Our device leverages state-of-the-art deep mastering fashions to investigate CXR pictures, considerably improving the accuracy and efficiency of pneumonia identification. In this version, highest accuracy became 97% which changed into achieved by using MobileNetV2. Through significant assessment, our technique has confirmed superior performance over traditional methods, supplying excessive accuracy, speed, and reliability. The “Advances in Medical Imaging” system no longer most effective aids radiologists in diagnosing pneumonia greater efficaciously but additionally holds the capacity to alleviate the workload in healthcare settings, in particular in underserved regions. This work underscores the transformative impact of AI in medical diagnostics, paving the way for broader applications in healthcare.

Keywords: Deep learning , Pneumonia , Accuracy , Reliability , Convolutional neural networks , Artificial intelligence , X-ray imaging , Medical diagnostic imaging , Faces , Biomedical imaging

DOI: [10.1109/ICCCNT61001.2024.10725661](https://doi.org/10.1109/ICCCNT61001.2024.10725661)

<https://ieeexplore.ieee.org/document/10725661>