# Automated Pneumonia Detection from Chest X-Rays using Machine Learning Approaches

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**Abstract**: *Pneumonia causes fluid or pus filling air sacs in one lung or both lungs leading to symptoms like fever and difficulty breathing quite rapidly. Pneumonia quite severely causes fluid or pus filling air sacs in lungs leading to symptoms like high fever and very difficult breathing.Accurate diagnosis pretty early on prevents many severe complications and improves outcomes for patients remarkably well in most cases. Traditional diagnosis relies heavily on interpretation of chest X-rays by radiologists which can be quite time- consuming and fairly inconsistent especially down there. Deep learning techniques specifically Convolutional Neural Networks trained on large datasets of chest X-rays develop an automated pneumonia detection system. Model provides remarkably swift diagnosis assisting healthcare pros reduce egregious human mistakes and improves access quite remarkably in woefully under-resourced locales.Recent advancements in machine learning and image processing techniques applied chest X-ray images for detecting pneumonia effectively nowadays. A comparative study of sundry models and datasets alongside preprocessing techniques and performance metrics used in extant literature is undertaken here..*

**Keywords**: Pneumonia Detection, Chest X-ray Images, Deep Learning, Convolutional Neural Networks (, Medical Imaging, Image Classification, Healthcare AI, Computer-Aided Diagnosis, Machine Learning, Feature Extraction, Data Augmentation, Radiology, Disease Detection, Automated Diagnosis, Biomedical Imaging