

Radiologist Assistant using Machine Learning

Mr. Sujay Sabale, Mr. Prajwal Takarkhede, Ms. Sanyukta Sadhankar, Ms. Mrunal Shirbhate

Ms. Sagar Gulhane, Prof. G.V.Dahake

SIPNA College of Engineering & Technology, Amravati, India

Abstract: *Pneumonia caused by bacterial or lung infection can cause life-threatening consequences and, in most cases, leads to death. As a result, it is important that diagnosis is carried out at an early stage to minimize any risks. Recent advancements in Machine Learning algorithms and medical imaging must find a way for automation systems to be developed, capable of diagnosing x-rays, thus simplifying the pneumonia detection process for radiologists and other medical experts. Chest pneumonia caused by bacterial or lung infection can cause life threatening consequences and, in most cases, leads to death. As a result, it is vital that diagnosis is carried out at an early stage to minimize any risks. Recent advancements in artificial intelligence and medical imaging have paved the way automation systems to be developed, capable of diagnosing x-rays, thus simplifying the pneumonia detection process for radiologist and other medical experts.*

The aim of this study is to develop and compare various models to help identify the chest x-rays, classifying them as either Normal (healthy) or Pneumonia (unhealthy). To achieve this, four existing state of the art Machine Learning (ML) models have been used. Experimentally results showed that Deep Learning (DL) techniques can be used to successfully classify CXR images, using DL based on Convolutional Neural Networks (CNN) with the greatest accuracy achieved being 75%. The abstract of a Radiologist Assistant using machine learning would likely discuss the development and implementation of an AI system to assist radiologists in their diagnostic tasks. Such a system could use machine learning algorithms to analyze medical images and identify potential abnormalities or areas of concern, providing more accurate and efficient diagnoses.

Keywords: Blockchain, Counterfeit, QR code, Web3.

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