Accrad
Accelerated Radiology

AI-based solution helps accelerate diagnosis of lung diseases

After chest X-rays are taken to detect COVID-19, viral pneumonia, and other diseases, it can often take days or weeks for test results to come back to patients. In that time, patient conditions can grow worse or spread to other people. In response, Accrad developed an AI-powered solution, CheXRad, capable of labeling certain pathologies in chest radiographs up to 160x faster than radiologists, and at comparable levels of accuracy, sensitivity, and specificity.[1]

CheXRad uses a machine learning–based desktop application designed for PCs in clinics and hospitals that can detect up to 15 thoracic diseases, including two of the deadliest: COVID-19 and viral pneumonia. Using the Intel® AI Analytics Toolkit as well as the Intel® Distribution of OpenVINO™ toolkit, CheXRad can classify and detect the probability of COVID-19 and viral pneumonia in preprocessed chest scan images. This also helps physicians and radiologists determine if patients are likely going to need a ventilator or medication. By quickly and accurately predicting disease pathologies, AI-powered solutions like Accrad's CheXRad application can help reduce radiologists' workloads and potentially accelerate diagnoses and treatments.

Based in South Africa, Accrad is building Africa's largest medical AI software company, devoted to conquering cancer and other pathologies across the continent.

Industry
Healthcare

Use case
Human wellness monitoring

Country
Global

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accrad.com

> *"With the help of Intel, we were able to train, optimize, and deploy a machine learning model in less time and at a lower operational cost than available alternatives, enabling us to get to market fast with a powerful solution that's optimized for Intel® architecture."*
>
> Moloti Tebogo Nakampe
> R&D Director
> Accrad

Read the solution brief

Intel® products and technologies
Intel® Distribution of OpenVINO™ toolkit
Intel® AI Analytics Toolkit
Intel® Deep Learning Boost
Intel® DevCloud for the Edge
Intel® DevCloud for oneAPI

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1 Based on Accrad test results. The average time for radiologists to complete labelling of 420 chest radiographs was 240 minutes. The deep learning algorithm labeled the same 420 chest radiographs in 15 minutes.