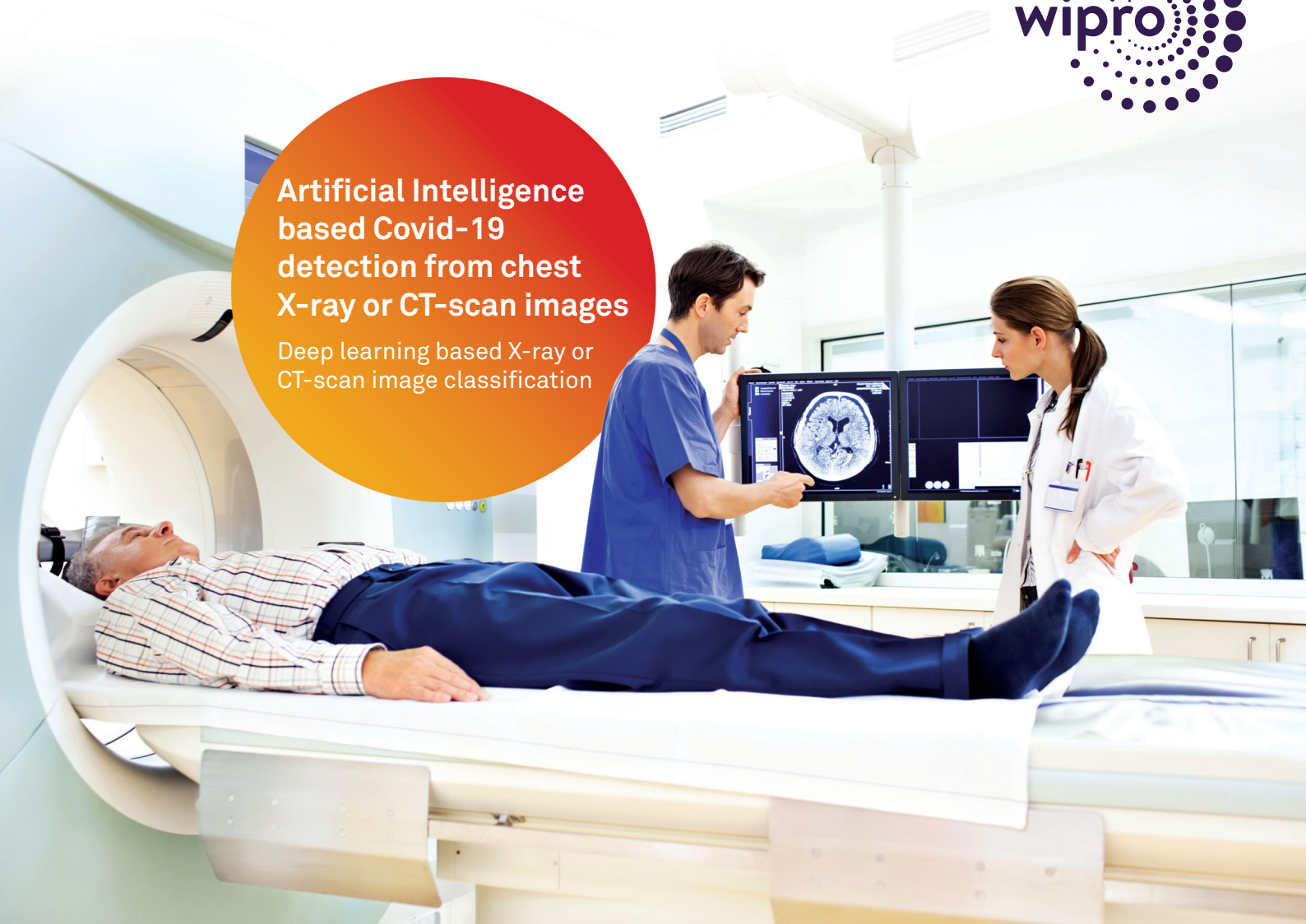




## Artificial Intelligence based Covid-19 detection from chest X-ray or CT-scan images

Deep learning based X-ray or CT-scan image classification



The scarcity of Covid-19 'Reverse Transcription Polymerase Chain Reaction' (RT-PCR) test kits is further compounded by the long turn-around time for test results with high (about 30-40%) false negatives. Hence, there is a need for ancillary Covid-19 diagnostic tools for selecting high-risk patients for RT-PCR testing or re-testing and isolating them while waiting for the test results. Wipro's fully automatic Artificial Intelligence (AI) tool detects Covid-19, pneumonia and normal cases from chest X-ray or CT-scan images.

### Key takeaways



AI based multi-class detection tool from chest X-ray or CT-scan images, without manual intervention



Real-time detection in about 5 seconds per image



Covid-19 detection accuracy is more than 95% with less than 2% false negatives

**Fully automated AI based Covid-19 detection complements conventional RT-PCR test limitations**

## Key benefits



Fully automatic AI based Covid-19 detection tool, which can work with either chest X-ray or CT-scan images



Detection tool can run on stand-alone server or on Cloud



Detection tool gives out instant results with very low false negative rate compared to RT-PCR tests



More than 95% detection accuracy with less than 2% false negatives

**AI based Covid-19 tool can be fully integrated with the existing hospital infrastructure and completely automated**

## Features



Works with 'Digital Imaging and Communications in Medicine' (DICOM) files and outputs detection result along with confidence scores



AI model is trained with about 7,000 X-ray/CT-scan images from normal, common pneumonia and Covid-19 classes



Graphical output and text log files for ease of review and records



Ease of deployment - can be deployed on stand-alone server or cloud



Can be fully integrated into the existing hospital infrastructure including DICOM and 'Electronic Medical Records' (EMR) systems through 'Health Level-7' (HL7)



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