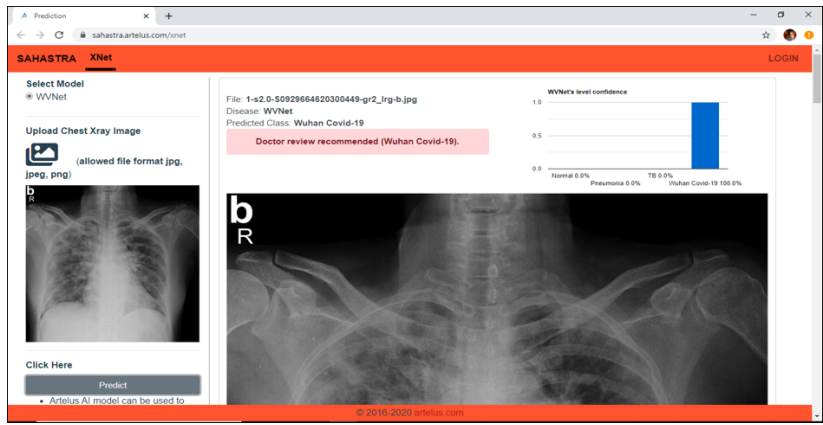
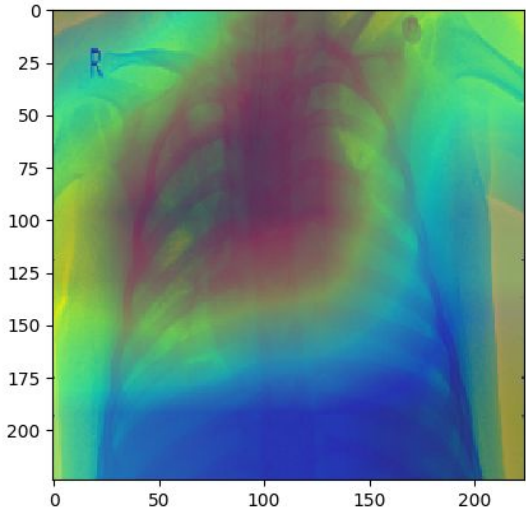


# Product Profile: Artelus

Product Name	T-Xnet
Company	Artificial Learning Systems India Private Limited
Company HQ	Bangalore, India
Version	1
Website	<a href="https://artelus.com/">https://artelus.com/</a>
Demo	<a href="http://xnet.artelus.com/">http://xnet.artelus.com/</a>
Last updated	April 17th, 2020
Description	T-Xnet is intended to mark regions of a chest x-ray with specific abnormalities associated with TB or pneumonia and alert radiologists and clinicians to these regions during image interpretation.
Certification	Stage of development: Validation Certification: pending
Intended Age Group	18+ years
Target Setting	Primary health centres, General hospital (above primary level), Teleradiology companies, Government/public sector, e.g. national TB program, Private sector
Current Market	Currently not on the market.
Input	Can be used to read images from any kind of chest X-ray machine. X-ray image format: JPEG, PNG, DICOM, TIFF Chest X-ray type: Posterior-anterior chest X-ray, Anterior-posterior chest X-ray, Lateral chest X-ray, Portable
Output	Structured report including: <ul style="list-style-type: none"> <li>● Heat map,</li> <li>● Probability score for TB,</li> <li>● Probability score for the following pulmonary abnormalities: Atelectasis, Cavity, Mass, Nodule, Pleural effusion, Pneumothorax</li> </ul>  <p>The screenshot shows the SAHASTRA XNet web interface. On the left, there is a 'Select Model' dropdown set to 'WVNet' and an 'Upload Chest Xray Image' section with a file upload icon and the text '(allowed file format jpg, jpeg, png)'. Below this is a 'Click Here Predict' button. The main area displays a chest X-ray image with a 'b' and 'R' marker. To the right of the image, there is a 'WVNet's level confidence' bar chart showing a 100% confidence score for 'Wuhan Covid-19'. The predicted class is 'Wuhan Covid-19' with a 100% confidence score. A red banner below the chart reads 'Doctor review recommended (Wuhan Covid-19)'. The file name is '1-s2.0-S0929664920300449-gr2_lrg-b.jpg' and the disease is 'WVNet'.</p>

	
<b>Deployment</b>	Offline only
Hardware	A computer with minimum 2 GM RAM and CPU with at least 2.3 GHz. (small stick computer will be sufficient)
X Ray Machine Validation	Optional: Fine tuning may be useful in certain scenarios. For this a dataset with a particular machine will need to be prepared.
Software	No external dependencies.
Server	Minimum 2GM RAM and CPU >= 2.3GHz
Integration	It is possible to integrate the product with the client's legacy Picture Archiving and Communication System (PACS).
Processing Time	Maximum 10 seconds
<b>Data Sharing &amp; Privacy</b>	
Server location (for online product)	Not applicable
Data shared with manufacturer?	No
De-identification (option to deidentify?)	Yes
<b>Software Updates</b>	
Frequency	Every 6 months
Cost	Company will upgrade the software and either ship a replacement device since it is offline, or the device can be bought online where we can remotely upgrade it. Extra costs: None
<b>Price</b>	Flexible pricing models are available. Please contact company for quote: Rajarajeshwari K.: <a href="mailto:kraji@artelus.com">kraji@artelus.com</a>
<b>Product Development</b>	
Method	Supervised deep learning (CNN, RNN)
Training	The product was trained on 120,000 chest X-rays from

	USA and China.
Reference Standard	Human Reader
<b>Publications</b>	Peer-reviewed publications are not yet available.