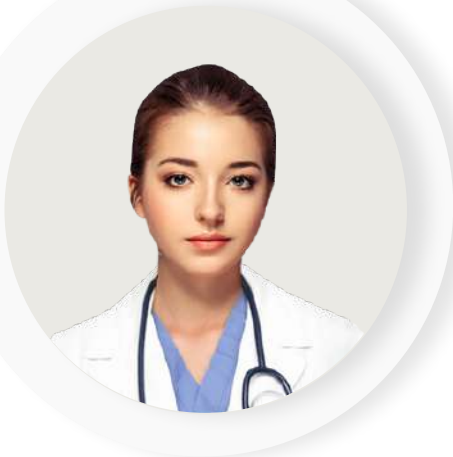




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Resilience **Redefined...**



# Av3ar

for  
Enterprise Radiology

Radiological practice would certainly benefit from systems that can read and interpret multiple images quickly, because the number of images has increased much faster over the last decade than the number of radiologists.

Imaging and radiology are expensive, and any solution that could reduce human labor, lower costs, and improve diagnostic accuracy would benefit patients and physicians alike.

Healthcare providers are now looking to curtail their systemic challenges including growing number of images to read and interpret, the management of IT infrastructure, and their core mission to deliver exceptional and high quality care to patients.



## Key Challenges in Radiology

### ↳ Ever increasing image volumes

With the growing and aging population, more imaging procedures are required to address rising healthcare needs. Besides, new modalities are producing increasing volumes of data that must be read and managed. The outcome is that physicians and radiologist are overloaded and hence more resources are needed for IT management



Radiologists need to read one image every 3–4 seconds in order to keep up with current demand.

Source: The Effects of Changes in Utilization and Technological Advancements of Cross-Sectional Imaging on Radiologist Workload



### ↳ Fragmented IT Infrastructure

Healthcare systems are often run as de facto holding companies — i.e., a collection of highly autonomous hospitals — rather than as integrated organizations that have standardized procedures and systematically reduced costs. In many cases, aggregated systems have led to a lack of standardization, the need to manage increasingly decentralized resources and missed opportunities for cost savings.

Up to 30% potential cost savings remain unrealized due to lack of system integration

Source: Size should matter: Five ways to help healthcare systems realize the benefits of scale

## ↪ Obstacles to collaboration, communication and quality care

Collaborations should foster among clinicians, both within an organization and among external partners so as to deliver quality care. Data and communication need to flow to right stakeholders in a timely manner.

Radiologists need to read one image every 3–4 seconds in order to keep up with current demand.

Source: 27th Annual HIMSS Leadership Survey



## Av3ar can help!

- ↪ Av3ar has the ability to ingest data from multiple sources including cardiology, radiology and other specialties. Our solution unifies disparate PACS (Picture Archiving and Communication System) across locations to give physicians better access to current and historical images.
- ↪ Av3ar handles high imaging volumes for vastly dispersed sites. It reads more images faster and without sacrificing the quality.
- ↪ Av3ar provides radiologist-trained AI solution which searches both structured and unstructured data in the electronic health record to find the clinically relevant patient data and then represent this in a single-unified-view summary for radiologist.
- ↪ Av3ar can also help in providing assistance to reading physicians by fast-tracking and simplifying the interpretation of large MRI scans/ studies.
- ↪ AI methods from Av3ar excel at automatically recognizing complex patterns in imaging data and providing quantitative assessments of radiographic characteristics to physicians.
- ↪ Av3ar used Natural language Processing (NLP) to facilitate critical results reporting.



# Benefits using Av3ar for Enterprise Radiology

## Resource Optimization

Allocate your human and financial resources more aptly while delivering quality service.

## Faster Scheduling and Registration Time

Use automated tasks and alerts, as well as resource-based scheduling to save staff-time.

## Improved Report Turnaround Time

Pre-populate reports automatically, significantly reducing time.

## Workflow Optimization

Optimize and improve radiologists' workflow through single interfaces, fewer clicks and better reports.

## Reduced IT Operational Overheads

Reduce the need for high maintenance resources and multiple vendor contracts.

## Maximized Automation and Analytics

Realize RoI by automating specific tasks and leverage analytics to optimize practice efficiency.



## Use Case

### Automated Chest X-ray Interpretation

Av3ar screens a chest X-ray employing deep learning technology. It classifies chest X-rays as normal or abnormal, identifies the abnormal findings, and highlights them on the X-ray. Av3ar also generates a description of the X-ray findings, including name, size and location of the abnormality that is used to pre-fill radiology reports. The algorithms have been trained and tested using a growing database of X-rays from



AUTOMATED X-RAY PREDICTION

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