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**USE CASE NAME:** AI-powered technology for imaging processing

**Provider/Owner:** Siemens / Siemens Healthineers / AI-Rad Companion

**Focus area** : (**please choose one**) **Healthcare\***, Banking, Insurance, Marketing and Sales

**THE NEED:**

**(What problem does this solution address? What business or social value does it add?)**

In many countries, the number of radiology examinations is skyrocketing, while the number of radiologists and imaging specialists is not keeping up with the trend. The result is a dramatically increased workload for radiologists.

Recent studies show that cutting radiologists’ interpretation time in half increases the interpretation error rate by 16.6%.

**THE SOLUTION:**

**(How does AI enable a solution to this problem/address the need?)**

Its solutions provide automatic post-processing of imaging datasets through AI-powered algorithms. The automation of routine workflows with repetitive tasks and high case volumes helps you to ease your daily workflow – so that you can focus on more critical issues.

With its deep learning algorithms, AI-Rad Companion automatically highlights abnormalities, segments anatomies, and compares results to reference values.

The Al-Rad Companion Chest CT detects and highlights lung nodules. Automatically after segmentation of the lung lesions, the volume, maximum 2D diameter, maximum 3D diameter and tumor burden is calculated.

There are 5 different application types;

Brain MR

Chest CT

Chest X-ray

Organs RT

Prostate MR

AI-Rad Companion supports you as a full-time radiology expert.

**AI APPROACH:**

**(Which of the following AI-technologies are used? )**

* Speech recognition
* **Image recognition and computer vision\***
* **Machine & Deep Learning\***
* Sensor fusion
* **Robotic Process Automation\***
* Natural Language Generation
* Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ETHICAL CHALLENGES AND RISKS** (if there is any):

* Software connection problems
* Security problems due to sample data in the cloud

**Source URL:**

<https://www.siemens-healthineers.com/digital-health-solutions/digital-solutions-overview/clinical-decision-support/ai-rad-companion#Clinical_Outcomes>

**Video URL**

<https://www.youtube.com/watch?v=EGjXACwxi8U>

<https://www.youtube.com/watch?v=6rWLcwasRx0>

<https://www.youtube.com/watch?v=NtvszWrHH5k>

<https://static.healthcare.siemens.com/siemens_hwem-hwem_ssxa_websites-context-root/wcm/idc/resources/hwem_assets/Video/customer-experience-with_ai-rad-companion_chest-ct-07079818~1~hd_16x9_webm.webm>

**Additional visual materials:**

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