


The PHILIPS logo is displayed in a bold, white, sans-serif font in the top left corner of the page. The background of the top half of the page is a blurred image of a person in a white lab coat holding a large sheet of MRI scan images.The intel logo is located in the top right corner, featuring the word "intel" in a lowercase, white, sans-serif font with a registered trademark symbol.A white rectangular box with a blue square graphic to its left contains the text "54X faster compress sensing over unoptimized TensorFlow*." in a blue, sans-serif font.

Accelerating Compressed Sensing Image Reconstruction Algorithms for MRI

Philips Healthcare integrated compressed sensing (CS) methods into their magnetic resonance imaging (MRI) scanners to reduce scan time by up to 50 percent for 2D and 3D sequences, compared to Philips scans without Compressed SENSE, with virtually equal image quality.² The company was able to speed up the compressed sensing workloads by as much as 54X on Intel® Xeon® Scalable Processors with the custom extensions feature of the Intel® Distribution of OpenVINO™ toolkit compared with unoptimized TensorFlow. Philips Healthcare was also able to leverage the Intel® DevCloud for the Edge to quickly benchmark their CS models on Intel CPU, VPU, FPGA and integrated GPU hardware. This allows them to assess various deep learning pipeline parameters such as performance, price, power and form factors for their designs.

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