

From PACS to AI - rediscovering radiology's soul



In his book "Hit Refresh," Satya Nadella, CEO of Microsoft, Inc., reveals that new challenges in the tech world make it necessary for the company to rediscover its soul – what made it unique. He posits that artificial intelligence (AI) is the tool that will help Microsoft transform to meet these challenges. Radiology is facing similar crossroads and it is also AI that will "help us rediscover radiology's soul," according to Srini Tridandapani, MSEE, PHD, MD, MSCR, MBA, from the Department of Radiology and Imaging Sciences, Emory University, Atlanta, GA.

In an Editorial published in the journal *Academic Radiology*, Dr. Tridandapani says radiologists have conquered the digitisation of medical imaging and picture archiving and communications systems (PACS).

"Many of us have not seen radiological images printed on film in over a decade, and some younger members of our profession may even wonder what that is," the author writes. "If PACS was our end-goal, then we have arrived, and there are no more transformational challenges to tackle in radiology."

Notably, PACS has led to generation of abundant data streams and this has resulted in new challenges. Without some help from technology, Dr. Tridandapani says, it will soon become almost impossible for humans to efficiently and effectively interpret all the images that highly advanced acquisition devices can rapidly throw at PACS.

So, it is time for radiology to rediscover its soul, the author says.

"Radiology needs to answer the following questions at a minimum: What do we do? How do we do it? Why do we do it? And how can we do it better? What value do we bring our referring colleagues, our healthcare system, our payers, our patients?"

The author describes how AI will "take out the drudgery" in radiologists' jobs -- for example, by quantitatively measuring the size of masses on sequential imaging studies. Also, through unsupervised learning techniques, machines will discover better ways of doing some of the things that radiologists do. But the author emphasises that AI will not be able to "replace" radiologists entirely even technically.

"That having been said, radiology needs to do some soul searching to redefine its role in healthcare given the increasingly prevalent role of computers," Dr. Tridandapani writes. "The advances in the future will free us to do what we should be doing more of, which is to reconnect with our patients and interpret test results for them. AI will allow us to approach what should be our true goal of providing patient- and family-centred care."

Source: [Academic Radiology](#)

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