Artificial Intelligence and Radiology

What you always wanted to know

What is Artificial Intelligence, Machine Learning and Deep Learning?

Artificial Intelligence (AI) is a computer system which is able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition and decision-making. Machine Learning enables automatic learning and improvement from experience without being explicitly programmed.

Deep Learning is a subset of Machine Learning that uses a model of computing which is inspired by the structure of the brain. Simplistically, layers of neural networks are utilised which progressively self-discover important features of the question at hand, be it detecting a fracture, finding a brain tumour or self-driving a car. This obviates the need to manually design an algorithm for such a task.

Applications of AI in Radiology

The applications of AI in Radiology are plentiful. Many of these can help streamline your daily tasks, help you make better clinical decisions and even provide a second opinion for your reads.

Studies could be triaged for reads, Important clinical data could be concurrently processed to help you come to a better diagnosis. Potential abnormalities could be highlighted to reduce your chance of missing a finding.

Will AI replace me?

Just like robots which are increasingly being used by Surgeons to better navigate and access difficult anatomical locations, we see AI as being increasingly used by Radiologists as a tool to improve our diagnoses and work efficiency.

Radiologists will still be needed to check, audit and maintain clinical AI systems. We are also strong advocates for the patient's privacy and should ensure that this should never be flouted be it in clinical or research AI systems.

Your job as a Radiologist will be enhanced, not lost.

How can I participate in this exciting development?

✦ Be actively involved in AI in your Radiology Practice.

✦ Engage AI companies and help guide them in the development of their products.

✦ Provide advice and guidance during adoption of new AI technology.

✦ Better yet, collaborate and form your own AI companies!

✦ Join us and come for our meetings. Sign up at http://srs.org.sg

The SRS RADII

RADII stands for Radiology AI, Data Science, Deep Learning and Imaging Informatics. It is a subsection of the Singapore Radiological Society, and is supported by the College of Radiologists, Singapore.

Our mission is to focus and facilitate the development of AI in Singapore Radiology, for the benefit of Patients, Radiologists and the Nation.

Our vision is a future for Radiology in Singapore which is Augmented with Artificial Intelligence for value-added, precise and safe healthcare, with benefits to all segments of the community.