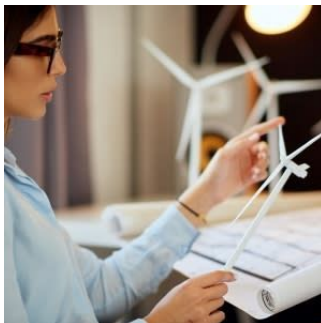

Sustainability in AI Requires More Focus



AI is transforming the world and it already has become a large part of the everyday activities in radiology. However, it is critical that we are aware that the positive changes it brings in healthcare holds possibility to have negative impacts in society. Ever-rising amounts of data has given rise to the field of AI ethics, and at its core is sustainable development.

It is therefore imperative that we become more conscious of sustainability when we discuss AI. The concept of sustainable AI is in its infancy – it is under developed, underfunded, and under researched. Unfortunately, there is insufficient monitoring, which means being able to measure the carbon footprint of AI is needed more than ever.

For example, Natural Language Processing (NLP) model can lead to approx. 600,000 lb of carbon dioxide emissions; this requires significant improvement if we are to prevent the financial and environmental costs.

Fortunately, there are practical aspects and methods that can be employed to measure carbon footprint. These include tools to calculate emissions, such as machine learning emissions calculator or carbon tracker – a tool for tracking or predicting the energy consumption and carbon emissions. Additionally, we can make smaller models, or take up other initiatives which explores how to train models faster and more efficiently, use specialised hardware, gain more awareness of where we store files, and use immersion-based cooling for different devices.

Until now sustainability is a field of ethics that has been mainly unexplored, but if we are to continue to use AI to power our society and healthcare, we cannot through its development, make our society unsustainable (Alberich-Bayarri 2023).

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