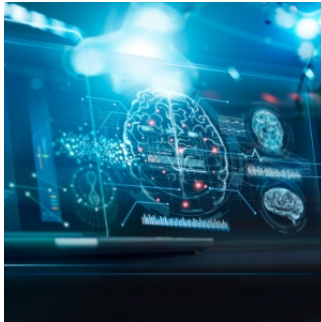# Recent Study Reveals AI's Ability to Seek Second Opinions

Researchers at Monash University are responsible for designing a new co-training algorithm for medical imaging, which can effectively replicate the process of asking for a second opinion. The results are published in a new article in Nature Machine intelligence.

PhD candidate Himashi Peiris, from the Faculty of Engineering, conducted research with the goal of creating a "dual-view" AI system. The research design involved a competition between two components of the system.

According to Peiris, one part of the AI system aims to mimic the process by which radiologists read and label medical images. Meanwhile, the second part of the AI system was responsible for evaluating the quality of the AI-generated labelled scans by comparing them against the limited labelled scans provided by radiologists. This served as a benchmark for the system's performance.

Traditionally, radiologists and other medical experts have manually annotated or labelled medical scans by identifying and highlighting specific areas of interest. This manual annotation process relies on the subjective interpretation of individual experts, and this process is time-consuming and prone to errors, which can slow down the development of AI-based solutions for medical imaging analysis.

The algorithm developed by the Monash researchers is designed to enable multiple AI models to harness the advantages of both labelled and unlabelled data, and leverage them to improve overall accuracy.

The algorithm produced remarkable results in semi-supervised learning, demonstrating ground-breaking performance even with limited annotations.

Peiris stated, "This enables AI models to make more informed decisions, validate their initial assessments, and uncover more accurate diagnoses and treatment decisions".

Source: Monash University

Image Credit: iStock

Published on : Tue, 1 Aug 2023