

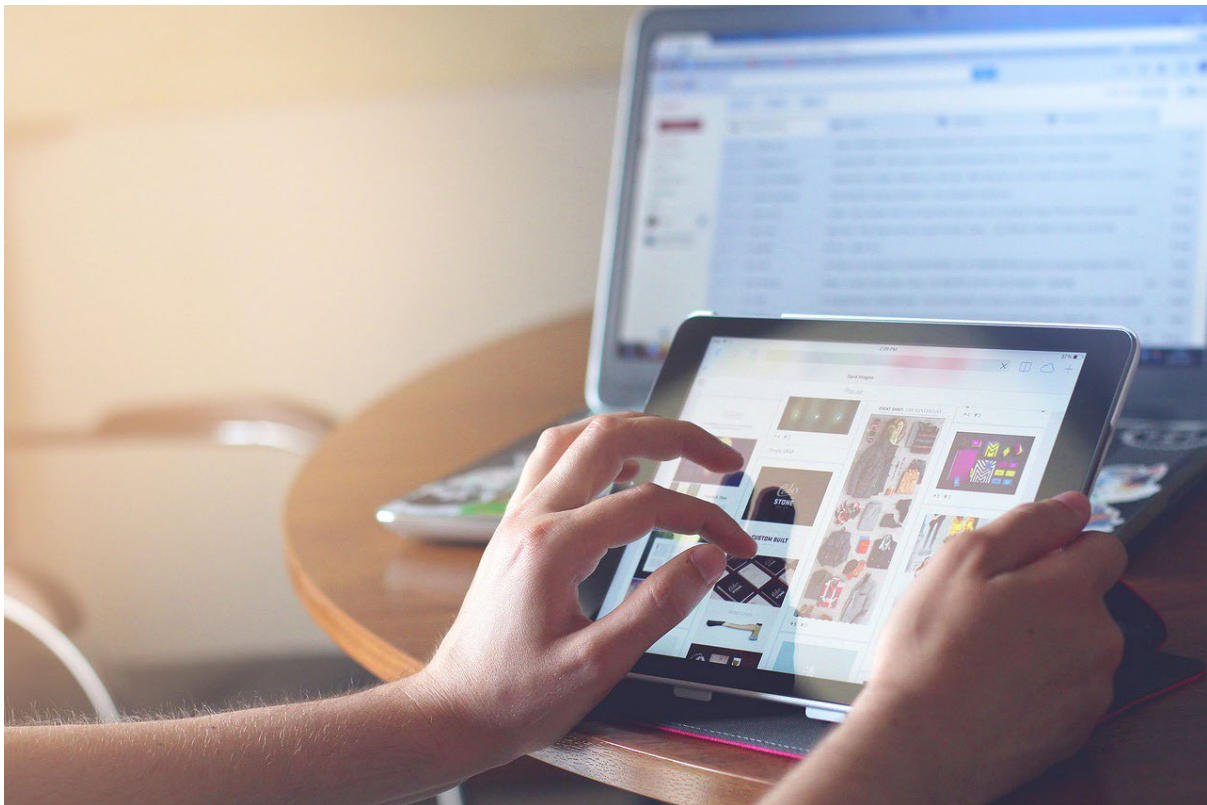


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## **NTU's AI Revolution: Transforming Media and Healthcare with SenticNet, Seq-DeepFake, and PINN**

NTU researchers are revolutionizing media and healthcare with AI programs like SenticNet, Seq-DeepFake, and PINN. These innovations promise accurate emotion analysis, deepfake detection, and early breast cancer detection, transforming various industries and improving lives.



### **Unraveling the Future: NTU's AI-Powered Transformations in Media and Healthcare**

In the heart of Singapore, Nanyang Technological University (NTU) researchers are revolutionizing the media landscape and healthcare with cutting-edge AI programs. Among these innovations, SenticNet and Seq-DeepFake stand out, promising to change the way we perceive and interact with media, while PINN prepares to reinvent the early detection of breast cancer.

#### **Emotion Analysis: SenticNet's Human-Inspired Approach**

In the realm of media, understanding emotions is paramount. Enter SenticNet, NTU's AI program that combines human learning modes with traditional machine learning to analyze emotions in a reliable and transparent manner. By mimicking human reasoning, SenticNet excels at inferring emotions from text, surpassing other models in accuracy.

Professor Erik Cambria, lead researcher on SenticNet, explains, "Our goal was to create a system that could comprehend emotions as humans do. SenticNet bridges the gap between human

understanding and machine learning, paving the way for enhanced content recommendation and generation."

### **Fighting Deepfakes: Seq-DeepFake's Forensic Prowess**

As manipulated media becomes increasingly sophisticated, detecting doctored images is more crucial than ever. Seq-DeepFake, another NTU AI innovation, addresses this challenge by recognizing digital fingerprints left by facial manipulation. Impressively, Seq-DeepFake can even recover the original face from the manipulated one.

"Seq-DeepFake marks a significant milestone in combating deepfakes," says Assistant Professor Liu Ziwei, the project's lead researcher. "As AI-generated content becomes more prevalent, tools like Seq-DeepFake will be essential in maintaining the integrity of digital media."

### **Early Breast Cancer Detection: PINN's Non-Invasive Promise**

Turning to healthcare, NTU researchers have developed PINN, an AI-powered program that uses heat-imaging technology to detect early breast cancer. Offering a non-invasive, painless, and quicker alternative to traditional mammograms, PINN has achieved an impressive 91 percent accuracy in identifying harmful tumors during testing.

"PINN represents a major breakthrough in breast cancer screening," states Associate Professor Eddie Ng Yin Kwee, lead researcher on the project. "We're confident that PINN will make routine examinations more accessible and less stressful for women worldwide."

As AI continues to evolve, NTU's groundbreaking innovations in media and healthcare offer a tantalizing glimpse into the future. By harnessing the power of human-inspired learning and state-of-the-art technology, these AI programs have the potential to reshape the world, fostering trust in digital media and improving healthcare outcomes for millions.

<https://bnnbreaking.com/tech/ntus-ai-revolution-transforming-media-and-healthcare-with-senticnet-seq-deepfake-and-pinn>