

Hong Kong builds AI model for non-invasive breast cancer diagnosis

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Large AI model “MOME” for testing in over ten hospitals



The Hong Kong University of Science and Technology (HKUST) has announced that its School of Engineering researchers have developed Mixture of Modality Experts (MOME), a groundbreaking large artificial intelligence (AI) model for non-invasive breast cancer diagnosis.

Trained on the China's largest multiparametric MRI (mpMRI) breast cancer dataset, MOME achieves expert-level accuracy in classifying tumor malignancy, comparable to that of radiologists with five+ years of experience.

This innovative solution is now undergoing extensive clinical validation across more than ten hospitals and partner institutions, including Shenzhen People's Hospital, the Guangzhou First Municipal People's Hospital, and Yunnan Cancer Center, to validate its effectiveness and ensure real-world applicability.

MOME delivered encouraging results in predicting responses to neoadjuvant chemotherapy, a treatment administered before surgery to shrink tumors and improve surgical outcomes, as well as in subtyping triple-negative breast cancer, a more aggressive subtype that requires specialized treatment strategies.