

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :26/12/2024

(21) Application No.202431103156 A

(43) Publication Date : 03/01/2025

(54) Title of the invention : AI-POWERED HYBRID BREAST IMAGING DEVICE FOR ENHANCED EARLY DETECTION AND DIAGNOSTIC PRECISION

(51) International classification	:G16H0010600000, A61B0006000000, G06T0007000000, A61B0006500000, A61B0005000000	(71) <b>Name of Applicant :</b> <b>1)Brainware University, Kolkata</b> Address of Applicant :398, Ramkrishnapur Rd, Near Jagadighata Market, Barasat, Kolkata, West Bengal 700125 -----  <b>Name of Applicant : NA</b> <b>Address of Applicant : NA</b>
(86) International Application No	:NA	(72) <b>Name of Inventor :</b>
Filing Date	:NA	<b>1)Prashant Kumar Jha</b> Address of Applicant :Assistant Professor, Department of Allied Health Sciences, Brainware University, 398, Ramkrishnapur Road, Kolkata-700125 -----
(87) International Publication No	: NA	<b>2)Subhamoy Satpathy</b> Address of Applicant :Tutor, Department of Allied Health Sciences, Brainware University, 398, Ramkrishnapur Road, Kolkata-700125 -----
(61) Patent of Addition to Application Number	:NA	<b>3)Avinash</b> Address of Applicant :Assistant Professor, Department of Allied Health Sciences, Brainware University, 398, Ramkrishnapur Road, Kolkata-700125 -----
Filing Date	:NA	<b>4)Kallal Das</b> Address of Applicant :Tutor, Department of Allied Health Sciences, Brainware University, 398, Ramkrishnapur Road, Kolkata-700125 -----
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The present invention discloses an AI-powered hybrid breast imaging device designed for enhanced early detection and diagnostic precision in breast cancer screening. The device integrates ultrasound and soft X-ray imaging into a single, portable system, enabling high-resolution 3D hybrid imaging that provides a comprehensive view of breast tissue. The ultrasound component captures soft tissue details, while the soft X-ray system detects dense tissues and microcalcifications. The device's AI-driven diagnostic engine analyzes the fused images to detect potential malignancies and abnormalities with high accuracy, reducing false positives and negatives. The portable design ensures accessibility in diverse healthcare settings, including mobile units and home screenings. Additionally, its IoT capabilities allow seamless integration with electronic health records (EHR) systems for efficient data sharing and remote consultations. RADI-SO-SCAN addresses the limitations of traditional breast imaging technologies, offering a cost-effective, precise, and scalable solution for early breast cancer detection and diagnosis. Accompanied Drawing [Fig. 1]

No. of Pages : 22 No. of Claims : 10