BREAST MASS DETECTION IN MAMMOGRAPHY IMAGES BASED ON IMPROVED DEEP TRANSFORMED MODEL

CBIS-DDSM Dataset Description

Guide name : Dr.B. Lakshmanan , Assistant Professor (Sl. Grade)

Imaging Modality	X-ray Preferred name: Film-Screen Mammography. RadLex ID: RID10573
Annotation Pattern	Combination of Object Detection and Image Segmentation
Annotation methodology and structure	Method of annotation ● Manual Annotation output ● Spreadsheet (alphanumeric) Storage, Portability, Interoperability ● Downloadable ZIP file (TCIA website)
Structure nomenclature and standards	● Skeletal age in months ● Element ID: RDE123 ● Name: Skeletal age ● Definition: The estimated skeletal age in months ● Question: What is the estimated skeletal age of the patient in months? ● Values: ○ Minimum Value: 0 ○ Maximum Value: 216 ○ Step Value: 1 ○ Units: months
Data use agreement/licensing	● Non-commercial purpose ● References to dataset
Imaging file/structure set format	DICOM
Number of images	Training set: 7,824 images Validation set: 2,415 images Test set: 200 images
Patient Demographics	Training: Female 0.46 (Mean age 127 months) Validation: Female 0.46 (Mean age 127 months) Test: Female 0.50 (Mean age 132 months)
Image Characteristics	Resolution ● Normalized Pre-processing ● None Burned-in PHI ● No
Labeler demographics	Scope of annotation: multi-institutional ● The CBIS-DDSM dataset was annotated by 40 board-certified radiologists from 8 different institutions.
Responsibilities quality, privacy	Manual review of images to exclude PHI
Reference	Yongye Su , Qian Liu , Wentao Xie , Pingzhao Hu,‘YOLO LOGO: A transformer-based YOLO segmentation model for breast mass detection and segmentation in digital mammograms’, Computer methods and programs in Biomedicine, Elsevier, Vol.no: 221, PP: 106903, 2022.