Department of Computer Science and Engineering
Bangladesh University of Business and Technology (BUBT)

CSE 478: Literature Review Records

Student's Id and Name	**Name:** Fabia Zaman Ekah and **ID:** 19202103225
Project Title	Deep Learning in Healthcare: Breast Cancer Detection and classification using Image Processing and CNN
Supervisor Name & Designation	**Name:** Khan Md. Hasib & **Designation:** Assistant Professor, Department of CSE, BUBT
Course Teacher's Name & Designation	**Name:** Khan Md. Hasib & **Designation:** Assistant Professor, Department of CSE, BUBT

Aspects	Paper # 1 (Title)
Title / Question (What is problem statement?)	Breast Cancer detection Using Convolutional Neural Networks for Mammogram Imaging System
Objectives / Goal (What is looking for?)	The main aim of the work was to speed up the diagnosis process by assisting specialist to diagnosis and classification the breast cancer.
Methodology / Theory (How to find the solution?)	The work was divided into some phases. • The first phase was to collect data, • The second phase was pre-processing and computation of data, and • In third phase, CNN classifier will then produce a model to recognize the mammogram image.
Software Tools (What program/software is used for design, coding and simulation?)	Implementation work was carried out at Intel(R) Core (TM) i7 CPU M60 @ 2.80 GHz in Jupyter.
Test / Experiment How to test and characterize the design/prototype?	For the experimental work, the datasets were divided into the ratio of 80used to train classification algorithms, and the remaining 20% used as test data.
Simulation/Test Data (What parameters are determined?)	Datasets was collected from - Kaggle.
Result / Conclusion (What was the final result?)	The true positive and true negative have remained high due to given label to be tested and accuracy was increase to 0.827 which mean 82.7input, convolution layer with kernel size 5x5 filter, pooling layer with pool size 2x2 filter and strides of 2, learning rate with 0.003, training step with 20,000.
Obstacles/Challenges (List the methodological obstacles if authors mentioned in the article)	This work has limitation to get more data. More mammograms need to train a better model, but it is less open source research data. Besides that, my knowledge on breast cancer may cause limitation of BCDCNN model. All of the breast cancer location or accuracy follow the given labelled data, we are difficult to identity every tissue and cell from mammogram ourself. There are difficult to set a perfect setting of parameters. It will cause around a day for 1 run, but need to restart the training once changing the parameter. It is consumed much of time for the project .
Terminology (List the common basic words frequently used in this research field)	CNN, Mammography, Tensorflow, ReLu.

Review Judgment (Briefly compare the objectives and results of all the articles you reviewed)	• According to a study for Breast Cancer Care, we have discovered that 42say that they do not have the staff to assign individuals with limited breast cancer specialist nurse. • Imaging (MRI), mammography, X-ray, and Ultrasound. Normally, mammography and MRI are used for breast cancer diagnosis. Besides, mammogram is a fast procedure which takes only about 20 minutes. The whole process is just an extremely small measure of radiation exposure from a mammogram which is safe than other treatment.
Review Outcome (Make a decision how to use/refer the obtained knowledge to prepare a separate and new methodology for your own research project)	Along with the convolutional Neural Networks, I would use another model to try to get a better result.