**Cover Sheet**

**Faculty of computer science and artificial intelligence Helwan**

**Selected Topics in Machine Learning 2**

**Team Number: 45**

1) Cover Sheet:

|  |  |  |
| --- | --- | --- |
| Student Name | ID | Degree |
| أمير سمير فوزي جابر | 202000160 |  |
| ماير رضا حبيب | 202000711 |  |
| فادي اسامة اكرام | 202000621 |  |
| محمد رضا محمد | 202000757 |  |
| يوسف محمد انور | 202001104 |  |
| احمد عماد شحاته محمود | 202000056 |  |

2) Paper details:

**A) The citation**

Authors name:

Majid Nawaz, Adel A. Sewissy, Taysir Hassan A. Soliman

Paper name:

Multi – Class Breast Classification using Deep Learning Convolutional Neural Network

Publisher name:

(IJACSA) International Journal of Advanced Computer Science and Applications

Year of publication: 2018

**B) Dataset used:** Breast-cancer.CSV

Implemented algorithm: Dense // CNN // adam

**3) Project Description:**

A) The dataset name: Breast-Cancer.CSV

Its link:

<https://www.kaggle.com/datasets/yasserh/breast-cancer-dataset?resource=download>

Total number of samples of dataset: 569

Number of classes: 2

The labels: malignant // not malignant

B) Implementation details:

Ratio used for training: 90%

Validation: 98%

Testing: 10%

The hyper parameters:

Learning rate: 0.00009

Activation functions: relu // sigmed

Optimizers: adam // sgd

c) Results details:

Its results: accuracy = 97%

Loss = 3%