

**Breast Cancer Prediction**

Faculty of Computers & Artificial Intelligence

Selected 1

Repository Link: <https://github.com/mahmoudhaney/BreastCancerPrediction>

**Team 15**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | ID | NAME | LEVEL | Department |
| 1 | 202000186 | آية عماد طلعت حرب | **3** | **CS** |
| 2 | 202000376 | **ساره وليد سيد** | **3** | **CS** |
| 3 | 202000649 | **فيروز جمعه منصور محمد** | **3** | **CS** |
| 4 | 202000677 | كريمه ابو حسيبه محارب | **3** | **CS** |
| 5 | 202000861 | محمود هاني سعيد | **3** | **CS** |
| 6 | **202000895** | مصطفى جمال عبد الحكيم | **3** | **CS** |
| 7 | **202001010** | نورهان طارق عبدالهادي | **3** | **CS** |

**Dataset Information**

Name

**Breast Cancer Prediction**

Classes

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| id | diagnosis | radius\_mean | texture\_mean | perimeter\_mean | area\_mean | smoothness\_mean |

|  |  |  |  |
| --- | --- | --- | --- |
| compactness\_mean | concavity\_mean | concave\_points\_mean | symmetry\_mean |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| fractal\_dimension\_mean | radius\_se | texture\_se | perimeter\_se | area\_se | smoothness\_se |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| compactness\_se | concavity\_se | concave\_points\_se | symmetry\_se | fractal\_dimension\_se |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| radius\_worst | texture\_worst | perimeter\_worst | area\_worst | smoothness\_worst |

|  |  |  |
| --- | --- | --- |
| compactness\_worst | concavity\_worst | concave\_points\_worst |

|  |  |
| --- | --- |
| symmetry\_worst | fractal\_dimension\_worst |

**Total Dataset Columns 32 Columns**

**Total Dataset Rows 570 Rows**

**Training Data 426**

**Validation Data 143**

Loss Curve

Chart

Description automatically generated

Accuracy Curve

A picture containing text

Description automatically generated

Chart

Description automatically generated with low confidence

Confusion Matrix

A picture containing treemap chart

Description automatically generated

A picture containing graphical user interface

Description automatically generated

ROC Curve

Graphical user interface, text

Description automatically generated

**Hyperparameters**

**SVM & Logistic Regression Models**

Before

**Model Accuracy: 94%**

Without Standardization

Training Data: 60%

After

**Model Accuracy: 97%**

With Standardization (-1, 1)

Training Data: 75%