**RANDOM FOREST CLASSIFIER**

**FLUX ONLY :**

**Target Variable: Cancer Stage**

MCC: -0.07342668945117176

Validation score: 0.2431098713641408

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[0 1 0 0 0 0 0]

[0 3 8 1 3 2 4]

[0 2 3 3 3 9 1]

[0 2 2 0 1 2 0]

[0 2 4 1 2 5 1]

[0 1 4 3 1 1 0]

[0 1 2 0 2 2 1]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.15 |
| RECALL | 0.12 |
| F1-SCORE | 0.13 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: 0.10971835778337434

Score: 0.3373493975903614

Validation scores: 0.31896398759894967

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 2 4 0 1 0 1]

[ 4 6 0 2 0 6]

[ 0 0 0 1 0 0]

[ 6 5 0 2 0 7]

[ 0 0 0 0 1 4]

[ 6 4 0 4 0 17]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.37 |
| RECALL | 0.34 |
| F1-SCORE | 0.33 |
| SUPPORT | 83 |

**GENES ONLY:**

**Target Variable: Cancer Stage**

MCC: 0.12111917564247468

Score : 0.25301204819277107

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 1 0 0 0 0 0 0]

[ 0 10 4 1 1 3 2 0]

[ 0 5 5 7 1 3 0 0]

[ 0 4 0 2 0 1 0 0]

[ 0 2 4 2 1 4 2 0]

[ 0 1 2 2 1 3 1 0]

[ 0 0 0 0 0 0 0 0]

[ 0 2 1 1 0 3 1 0]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.26 |
| RECALL | 0.25 |
| F1-SCORE | 0.24 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: 0.05865125331266938

**Validation Score:**

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 1 3 0 0 0 4]

[ 2 3 0 0 0 13]

[ 0 1 0 0 0 0]

[ 0 3 0 4 2 11]

[ 0 0 0 1 0 4]

[ 4 3 0 2 2 20]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.35 |
| RECALL | 0.34 |
| F1-SCORE | 0.31 |
| SUPPORT | 83 |

**CLINICAL DATA:**

**Target Variable: Cancer Stage**

MCC: 0.9130538053926716

SCORE: 0.927710843373494

**Validation score:**

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 1 0 0 0 0 0]

[ 0 21 0 0 0 0 0]

[ 0 0 20 1 0 0 0]

[ 0 0 0 7 0 0 0]

[ 0 0 0 1 14 0 0]

[ 0 0 0 0 0 10 0]

[ 0 0 0 2 0 1 5]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.93 |
| RECALL | 0.93 |
| F1-SCORE | 0.92 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: 0.42745017345468067

**Score:** 0.5783132530120482

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 2 0 0 6 0 0]

[ 0 1 0 0 0 17]

[ 0 0 0 0 0 1]

[ 6 0 0 13 0 1]

[ 0 0 0 0 5 0]

[ 0 3 0 1 0 27]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.51 |
| RECALL | 0.58 |
| F1-SCORE | 0.52 |
| SUPPORT | 83 |

**ALL DATA SETS:**

**Target Variable: Cancer Stage**

MCC: 0.8840866447369843

**score:** 0.9036144578313253

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 1 0 0 0 0 0]

[ 0 21 0 0 0 0 0]

[ 0 0 20 1 0 0 0]

[ 0 0 0 7 0 0 0]

[ 0 0 0 1 14 0 0]

[ 0 0 0 1 0 9 0]

[ 0 0 1 2 0 1 4]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.92 |
| RECALL | 0.90 |
| F1-SCORE | 0.90 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: 0.10414745439511772

**Validation Score:** 0.21774076150499302

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 2 3 0 3 0 0]

[ 0 5 0 2 1 10]

[ 0 1 0 0 0 0]

[ 5 6 0 4 1 4]

[ 0 0 0 4 0 1]

[ 3 4 0 5 2 17]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.33 |
| RECALL | 0.34 |
| F1-SCORE | 0.33 |
| SUPPORT | 83 |