**RANDOM FOREST CLASSIFIER**

**FLUX ONLY:**

**Target Variable: Cancer Stage**

MCC: 0.007674409030438855

Validation score: 0.26982983282793527

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[0 0 0 0 1 0 0]

[0 3 9 3 2 2 2]

[0 4 9 1 5 2 0]

[0 0 4 0 2 1 0]

[0 1 4 3 5 2 0]

[0 1 4 4 1 0 0]

[0 2 4 1 1 0 0]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.19 |
| RECALL | 0.20 |
| F1-SCORE | 0.19 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: -0.053175315836460006

Validation scores: 0.2544898702393959

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 1 5 0 2 0 0]

[ 2 3 0 5 1 7]

[ 1 0 0 0 0 0]

[ 4 9 0 1 1 5]

[ 1 1 0 0 0 3]

[ 6 6 0 6 1 12]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.22 |
| RECALL | 0.20 |
| F1-SCORE | 0.21 |
| SUPPORT | 83 |

**GENES ONLY:**

**Target Variable: Cancer Stage**

MCC: 0.06415631274276816  
Validation Score : 0.1906247846266503

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[0 0 0 0 0 1 0 0]

[2 6 6 2 2 2 1 0]

[0 5 6 5 2 3 0 0]

[0 1 2 3 1 0 0 0]

[0 3 6 2 3 1 0 0]

[0 2 4 1 0 2 0 1]

[0 0 0 0 0 0 0 0]

[0 3 1 0 2 2 0 0]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.23 |
| RECALL | 0.24 |
| F1-SCORE | 0.23 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: 0.02842589117554106

**Validation Score:** 0.2746137369903973

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 3 0 2 1 2]

[ 4 4 0 3 0 7]

[ 0 1 0 0 0 0]

[ 3 4 0 5 1 7]

[ 0 1 0 2 1 1]

[ 3 10 0 4 1 13]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.29 |
| RECALL | 0.28 |
| F1-SCORE | 0.28 |
| SUPPORT | 83 |

**CLINICAL DATA:**

**Target Variable: Cancer Stage**

MCC: 0.8685856096767394

**Validation score:** 0.9079470476813931

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 1 0 0 0 0 0 0]

[ 0 19 0 0 0 0 0 2]

[ 0 0 20 1 0 0 0 0]

[ 0 0 0 7 0 0 0 0]

[ 0 0 0 1 14 0 0 0]

[ 0 0 0 0 0 10 0 0]

[ 0 0 0 0 0 0 0 0]

[ 0 0 0 1 0 1 2 4]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.91 |
| RECALL | 0.89 |
| F1-SCORE | 0.90 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: 0.38267009065506147

**Validation Score:** 0.5305379338930096

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 3 0 0 5 0 0]

[ 0 6 0 0 0 12]

[ 0 0 0 0 0 1]

[ 6 0 0 12 0 2]

[ 0 0 0 0 5 0]

[ 1 10 1 0 0 19]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.55 |
| RECALL | 0.54 |
| F1-SCORE | 0.54 |
| SUPPORT | 83 |

**ALL DATA SETS:**

**Target Variable: Cancer Stage**

MCC: 0.7800096191699919

Validation score : 0.7718895115005172

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 1 0 0 0 0 0 0 0]

[ 1 20 0 0 0 0 0 0 0]

[ 0 0 20 0 1 0 0 0 0]

[ 0 0 0 0 0 0 0 0 0]

[ 0 0 0 0 6 0 1 0 0]

[ 0 0 0 0 1 14 0 0 0]

[ 0 0 0 1 0 0 6 0 3]

[ 0 0 0 0 0 0 0 0 0]

[ 0 1 0 0 3 0 1 1 2]]

CLASSIFICATION REPORT

|  |  |
| --- | --- |
| PRECISION | 0.84 |
| RECALL | 0.82 |
| F1-SCORE | 0.82 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: 0.35544165872617045

Validation Score : 0.5038110349222779

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 4 0 0 4 0 0]

[ 0 3 0 0 0 15]

[ 0 0 0 0 0 1]

[10 1 0 9 0 0]

[ 0 0 0 0 4 1]

[ 1 5 0 0 2 23]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.52 |
| RECALL | 0.52 |
| F1-SCORE | 0.50 |
| SUPPORT | 83 |