**RANDOM FOREST CLASSIFIER**

**FLUX ONLY :**

**Target Variable: Cancer Stage**

MCC: 0.059435823332543124

Validation score: 0.22000351535455903

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 1 0 0 0 0 0 0]

[ 0 6 8 2 2 3 0 0]

[ 0 6 10 1 2 2 0 0]

[ 0 3 1 0 2 1 0 0]

[ 0 3 5 0 2 2 1 2]

[ 0 1 4 2 0 3 0 0]

[ 0 0 0 0 0 0 0 0]

[ 0 2 2 0 2 2 0 0]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.22 |
| RECALL | 0.25 |
| F1-SCORE | 0.23 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: 0.08217571362784888

Validation scores: 0.257706871849424

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 1 2 0 2 0 3]

[ 2 7 0 2 1 6]

[ 0 0 0 1 0 0]

[ 4 5 0 4 1 6]

[ 1 1 0 1 0 2]

[ 7 4 0 5 1 14]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.32 |
| RECALL | 0.31 |
| F1-SCORE | 0.31 |
| SUPPORT | 83 |

**GENES ONLY:**

**Target Variable: Cancer Stage**

MCC: 0.06883638420664623

**Validation score:** 0.16377483364200635

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 0 1 0 0 0 0 0]

[ 0 11 2 2 0 6 0 0]

[ 0 4 6 1 4 4 0 2]

[ 0 4 2 0 1 0 0 0]

[ 0 1 9 0 1 4 0 0]

[ 0 2 1 1 3 3 0 0]

[ 0 0 0 0 0 0 0 0]

[ 0 2 2 1 1 1 1 0]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.22 |
| RECALL | 0.25 |
| F1-SCORE | 0.23 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: 0.10860650835344653

**Validation Score:** 0.1966692182738198

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 2 4 0 1 1 0]

[ 1 5 0 3 3 6]

[ 0 1 0 0 0 0]

[ 5 6 0 3 0 6]

[ 0 0 0 3 0 2]

[ 4 3 0 6 0 18]]

CLASSIFICATION REPORT:

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

**CLINICAL DATA:**

**Target Variable: Cancer Stage**

MCC: 0.8229136595956893

**Validation score:** 0.7929142257700132

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 1 0 0 0 0 0 0]

[ 0 21 0 0 0 0 0 0]

[ 0 0 20 1 0 0 0 0]

[ 0 0 1 5 1 0 0 0]

[ 0 1 2 1 11 0 0 0]

[ 0 0 0 0 0 10 0 0]

[ 0 0 0 0 0 0 0 0]

[ 0 0 2 0 0 1 1 4]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.87 |
| RECALL | 0.86 |
| F1-SCORE | 0.85 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: 0.4386155430856853

**Validation Score:** 0.49865678847296485

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 5 0 0 3 0 0]

[ 0 6 0 0 0 12]

[ 0 0 0 0 0 1]

[ 9 0 1 10 0 0]

[ 0 0 0 0 5 0]

[ 0 8 0 1 0 22]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.59 |
| RECALL | 0.58 |
| F1-SCORE | 0.58 |
| SUPPORT | 83 |

**ALL DATA SETS:**

**Target Variable: Cancer Stage**

MCC: 0.164376302510605

**Validation score:** 0.17057141572321838

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 1 0 0 0 0 0 0]

[ 0 15 2 2 0 2 0 0]

[ 0 4 6 0 5 4 0 2]

[ 0 2 1 1 1 1 0 1]

[ 1 1 6 2 1 4 0 0]

[ 0 3 1 1 1 4 0 0]

[ 0 0 0 0 0 0 0 0]

[ 0 2 2 1 2 0 1 0]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.28 |
| RECALL | 0.33 |
| F1-SCORE | 0.30 |
| 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 |