**RANDOM FOREST CLASSIFIER**

**FLUX ONLY :**

**Target Variable: Cancer Stage**

MCC: 0.013166129771535372

Validation score: 0.20695574430095628

CONFUSION MATRIX:

Confusion Matrix, without normalization

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

[0 2 5 1 1 1 1 1 0 0]

[0 7 9 0 1 2 0 3 1 0]

[0 0 0 0 0 0 0 0 0 0]

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

[0 6 1 1 3 1 0 2 2 0]

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

[0 4 3 0 0 2 0 1 1 0]

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

[0 0 2 0 0 0 0 0 0 0]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.20 |
| RECALL | 0.19 |
| F1-SCORE | 0.19 |
| SUPPORT | 80 |

**Target Variable: Primary Tumour Site**

MCC: 0.025868153872651983

Validation scores: 0.26881065069706045

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[0 1 0 0 1 0 0]

[3 2 3 0 1 1 4]

[0 7 7 0 3 3 4]

[0 0 2 0 1 0 1]

[1 4 4 0 3 1 0]

[0 0 0 0 0 0 1]

[1 6 6 1 1 1 6]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.26 |
| RECALL | 0.23 |
| F1-SCORE | 0.24 |
| SUPPORT | 80 |

**GENES ONLY:**

**Target Variable: Cancer Stage**

MCC: 0.022890179294293284

Validation score: 0.33335830207129197

CONFUSION MATRIX:

Confusion Matrix, without normalization

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

[ 0 3 5 2 1 0 1 0 0]

[ 0 4 12 2 3 0 2 0 0]

[ 0 0 5 1 5 0 0 0 0]

[ 0 4 7 2 2 0 1 0 0]

[ 0 0 1 0 0 0 0 0 0]

[ 0 3 4 1 2 0 1 0 0]

[ 0 1 0 0 1 0 1 0 0]

[ 0 0 2 0 0 0 0 0 0]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.19 |
| RECALL | 0.24 |
| F1-SCORE | 0.21 |
| SUPPORT | 80 |

**Target Variable: Primary Tumour Site**

MCC: -0.05103530148067185

**Validation Score:** 0.2584031747495236

Confusion Matrix, without normalization

[[0 1 0 0 0 0 1]

[0 1 6 1 3 0 3]

[0 4 7 0 6 0 7]

[0 0 1 0 1 0 2]

[0 2 6 0 3 0 2]

[0 0 1 0 0 0 0]

[0 1 9 0 5 2 5]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.19 |
| RECALL | 0.20 |
| F1-SCORE | 0.19 |
| SUPPORT | 80 |

**CLINICAL DATA:**

**Target Variable: Cancer Stage**

MCC: 0.6291100019051532

**Validation score:** 0.77709650858186

CONFUSION MATRIX:

Confusion Matrix, without normalization

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

[ 0 12 0 0 0 0 0 0 0 0]

[ 0 1 22 0 0 0 0 0 0 0]

[ 0 0 0 0 0 0 0 0 0 0]

[ 0 0 3 0 5 3 0 0 0 0]

[ 0 0 0 1 2 12 0 1 0 0]

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

[ 0 0 3 0 0 4 0 4 0 0]

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

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

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.69 |
| RECALL | 0.70 |
| F1-SCORE | 0.67 |
| SUPPORT | 80 |

**Target Variable: Primary Tumour Site**

MCC: 0.23070798058065614

**Validation Score:** 0.4919360165696373

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 0 2 0 0 0 0]

[ 0 3 0 0 10 0 1]

[ 1 0 13 0 0 0 10]

[ 1 0 0 1 2 0 0]

[ 0 3 0 2 7 1 0]

[ 0 0 0 0 0 1 0]

[ 0 0 13 0 1 1 7]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.41 |
| RECALL | 0.40 |
| F1-SCORE | 0.39 |
| SUPPORT | 80 |

**ALL DATA SETS:**

**Target Variable: Cancer Stage**

MCC: 0.04645455944882274

**Validation score:** 0.32534527247545797

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 0 1 0 0 0 0]

[ 0 8 12 1 0 0 0]

[ 0 7 12 1 0 1 0]

[ 0 2 5 0 0 0 0]

[ 0 6 8 0 1 0 0]

[ 0 3 6 0 0 1 0]

[ 0 2 5 0 1 0 0]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.20 |
| RECALL | 0.25 |
| F1-SCORE | 0.22 |
| SUPPORT | 80 |

**Target Variable: Primary Tumour Site**

MCC: -0.007505478653537306

**Validation Score:** 0.2753067896437572

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 1 1 0 0 0 0]

[ 0 1 5 1 3 0 4]

[ 0 4 7 0 5 1 7]

[ 0 0 2 0 1 0 1]

[ 0 2 4 0 4 0 3]

[ 0 0 1 0 0 0 0]

[ 0 1 10 0 4 0 7]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.22 |
| RECALL | 0.24 |
| F1-SCORE | 0.22 |
| SUPPORT | 80 |