**RANDOM FOREST CLASSIFIER**

**FLUX ONLY :**

**Target Variable: Cancer Stage**

MCC: 0.11930528683729495

Validation score: 0.20714248244576056

CONFUSION MATRIX:

Confusion Matrix, without normalization

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

[ 1 10 7 0 2 1 0 0 0]

[ 0 4 10 3 2 1 0 0 0]

[ 0 3 3 0 0 0 1 0 0]

[ 1 6 6 0 1 1 0 0 0]

[ 0 0 5 1 0 4 0 0 0]

[ 0 0 0 0 0 0 0 0 0]

[ 0 3 2 2 1 0 0 0 0]

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

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.26 |
| RECALL | 0.30 |
| F1-SCORE | 0.27 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: 0.07866019422229936

Validation scores: 0.27933022109136907

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 2 2 0 1 1 2 0]

[ 2 5 0 3 1 7 0]

[ 0 1 0 0 0 0 0]

[ 6 3 0 4 0 7 0]

[ 0 2 0 1 0 2 0]

[ 4 8 0 3 0 15 0]

[ 0 0 0 0 0 1 0]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.31 |
| RECALL | 0.31 |
| F1-SCORE | 0.30 |
| SUPPORT | 83 |

**GENES ONLY:**

**Target Variable: Cancer Stage**

MCC: 0.053045046223399346

**Validation score:** 0.2555463930530998

CONFUSION MATRIX:

Confusion Matrix, without normalization

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

[ 0 13 4 1 2 1 0 0 0]

[ 0 5 9 2 3 0 1 0 0]

[ 0 3 3 0 0 1 0 0 0]

[ 0 6 8 1 0 0 0 0 0]

[ 0 5 3 0 2 0 0 0 0]

[ 0 0 0 0 0 0 0 0 0]

[ 0 4 3 0 0 1 0 0 0]

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

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.16 |
| RECALL | 0.27 |
| F1-SCORE | 0.20 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: 0.05924010924716591

**Validation Score:** 0.2938052848216511

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 3 1 0 0 0 4 0]

[ 2 6 0 0 0 10 0]

[ 0 1 0 0 0 0 0]

[ 5 1 0 2 0 12 0]

[ 2 1 0 0 0 2 0]

[ 3 8 0 4 0 15 0]

[ 0 0 0 1 0 0 0]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.29 |
| RECALL | 0.31 |
| F1-SCORE | 0.28 |
| SUPPORT | 83 |

**CLINICAL DATA:**

**Target Variable: Cancer Stage**

MCC: 0.6903341685270992

**Validation score:** 0.7001648004114798

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 1 0 0 0 0 0 0]

[ 0 20 0 0 0 1 0 0]

[ 0 2 19 0 0 0 0 0]

[ 0 2 0 5 0 0 0 0]

[ 0 1 2 2 10 0 0 0]

[ 0 0 1 1 0 8 0 0]

[ 0 0 0 0 0 0 0 0]

[ 0 1 3 1 1 1 1 0]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.69 |
| RECALL | 0.75 |
| F1-SCORE | 0.71 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: 0.29448026353681167

**Validation Score:** 0.5383493018419487

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 2 0 0 6 0 0]

[ 0 4 0 0 0 14]

[ 0 1 0 0 0 0]

[12 0 0 8 0 0]

[ 0 0 0 0 5 0]

[ 2 9 0 0 0 20]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.49 |
| RECALL | 0.47 |
| F1-SCORE | 0.47 |
| SUPPORT | 83 |

**ALL DATA SETS:**

**Target Variable: Cancer Stage**

MCC: 0.168005785157115

**Validation score:** 0.26074820077666383

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 1 0 0 0 0 0]

[ 0 13 6 0 0 2 0]

[ 1 8 11 1 0 0 0]

[ 0 2 4 1 0 0 0]

[ 0 4 5 1 3 2 0]

[ 0 3 6 0 0 1 0]

[ 0 2 2 1 0 3 0]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.40 |
| RECALL | 0.35 |
| F1-SCORE | 0.31 |
| SUPPORT | 83 |

**Target Variable: Primary Tumour Site**

MCC: -0.03688336515671356

**Validation Score:** 0.40259240890882264

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 1 4 0 1 0 2]

[ 0 4 0 1 0 13]

[ 0 1 0 0 0 0]

[ 4 5 0 1 0 10]

[ 0 2 0 1 0 2]

[ 2 9 0 4 0 16]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.22 |
| RECALL | 0.27 |
| F1-SCORE | 0.23 |
| SUPPORT | 83 |