**RANDOM FOREST CLASSIFIER**

**FLUX ONLY :**

**Target Variable: Cancer Stage**

MCC: -0.023022711813525845

Validation score: 0.24685094753679948

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 0 0 0 1 0 1]

[ 1 1 5 0 0 0 7]

[ 0 5 11 0 2 0 6]

[ 0 0 1 0 1 0 2]

[ 0 0 6 0 3 0 4]

[ 0 0 1 0 0 0 0]

[ 0 3 10 0 5 0 4]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.20 |
| RECALL | 0.24 |
| F1-SCORE | 0.22 |
| SUPPORT | 80 |

**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:**

MCC: 0.00438337637112748

Validation score: 0.2766455986614823

CONFUSION MATRIX:

Confusion Matrix, without normalization

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

[ 0 3 5 1 2 0 1 0 0]

[ 0 7 11 0 4 0 1 0 0]

[ 0 3 2 2 3 0 1 0 0]

[ 0 2 11 0 1 0 2 0 0]

[ 0 1 0 0 0 0 0 0 0]

[ 0 2 4 1 3 0 1 0 0]

[ 0 0 2 1 0 0 0 0 0]

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

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.20 |
| RECALL | 0.23 |
| F1-SCORE | 0.20 |
| SUPPORT | 80 |

**Target Variable: Primary Tumour Site**

MCC: 0.07135833941599674

**Validation Score:** 0.2596520935960591

CONFUSION MATRIX: Confusion Matrix, without normalization

[[ 0 0 2 0 0 0 0]

[ 0 1 8 0 4 0 1]

[ 0 4 13 0 5 0 2]

[ 0 0 3 0 0 0 1]

[ 0 1 5 0 7 0 0]

[ 0 0 0 0 0 1 0]

[ 0 2 9 0 10 0 1]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.23 |
| RECALL | 0.29 |
| F1-SCORE | 0.23 |
| SUPPORT | 83 |

**CLINICAL DATA:**

**Target Variable: Cancer Stage**

MCC: 0.7092871594017043

**Validation score:** 0.746670821857917

CONFUSION MATRIX:

Confusion Matrix, without normalization

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

[ 0 11 0 0 1 0 0 0 0]

[ 0 1 22 0 0 0 0 0 0]

[ 0 1 2 8 0 0 0 0 0]

[ 0 0 2 0 12 0 2 0 0]

[ 0 0 0 0 0 1 0 0 0]

[ 0 1 3 0 1 0 6 0 0]

[ 0 0 2 0 0 0 0 1 0]

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

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.76 |
| RECALL | 0.76 |
| F1-SCORE | 0.74 |
| SUPPORT | 80 |

**Target Variable: Primary Tumour Site**

MCC: 0.4353495897172133

**Validation Score:** 0.4747782519486374

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 1 0 0 0 0 1]

[ 0 5 0 0 8 0 1]

[ 0 0 16 1 0 0 7]

[ 0 0 0 1 3 0 0]

[ 0 4 0 0 9 0 0]

[ 0 0 0 0 0 1 0]

[ 0 0 8 0 0 1 13]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.55 |
| RECALL | 0.56 |
| F1-SCORE | 0.55 |
| SUPPORT | 80 |

**ALL DATA SETS:**

**Target Variable: Cancer Stage**

MCC: 0.01390318119940128

**Validation score:** 0.2971109007697864

CONFUSION MATRIX:

Confusion Matrix, without normalization

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

[ 0 3 5 0 2 0 2 0 0]

[ 0 7 11 1 3 0 1 0 0]

[ 0 1 7 2 1 0 0 0 0]

[ 0 5 7 0 1 0 2 1 0]

[ 0 1 0 0 0 0 0 0 0]

[ 0 5 4 1 1 0 0 0 0]

[ 0 0 1 0 1 0 0 1 0]

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

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.21 |
| RECALL | 0.23 |
| F1-SCORE | 0.20 |
| SUPPORT | 80 |

**Target Variable: Primary Tumour Site**

MCC: 0.08597063347575598

**Validation Score:** 0.27729957683177764

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 0 1 0 0 0 1]

[ 0 2 6 0 2 0 4]

[ 0 0 14 0 3 0 7]

[ 0 0 1 0 1 0 2]

[ 0 3 4 0 5 0 1]

[ 0 0 1 0 0 0 0]

[ 0 0 8 0 10 0 4]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.29 |
| RECALL | 0.31 |
| F1-SCORE | 0.28 |
| SUPPORT | 80 |