**RANDOM FOREST CLASSIFIER**

**FLUX ONLY :**

**Target Variable: Cancer Stage**

MCC: 0.022153945431709666

Validation score: 0.26426317417451356

CONFUSION MATRIX:

Confusion Matrix, without normalization

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

[0 5 4 1 0 0 2 0 0]

[0 5 9 4 0 0 5 0 0]

[0 2 4 1 0 0 4 0 0]

[0 4 8 0 0 0 4 0 0]

[0 1 0 0 0 0 0 0 0]

[0 4 4 1 0 0 2 0 0]

[0 1 0 0 0 0 2 0 0]

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

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.15 |
| RECALL | 0.21 |
| F1-SCORE | 0.17 |
| SUPPORT | 80 |

**Target Variable: Primary Tumour Site**

MCC: -0.023315260890950745

Validation scores: 0.2968362961694605

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 0 1 0 1 0 0]

[ 0 1 5 0 5 0 3]

[ 0 2 7 0 3 2 10]

[ 0 0 3 0 0 0 1]

[ 0 2 4 0 2 0 5]

[ 0 0 0 0 0 0 1]

[ 1 4 6 0 3 0 8]]

CLASSIFICATION REPORT:

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

**GENES ONLY:**

**Target Variable: Cancer Stage**

MCC: -0.05690712346094224

Validation score: 0.2965841025088333

CONFUSION MATRIX:

Confusion Matrix, without normalization

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

[0 2 7 0 3 0 0 0 0]

[0 0 8 5 8 0 2 0 0]

[0 0 6 0 5 0 0 0 0]

[0 2 7 1 5 0 1 0 0]

[0 0 0 1 0 0 0 0 0]

[0 2 6 1 2 0 0 0 0]

[0 0 2 0 1 0 0 0 0]

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

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.15 |
| RECALL | 0.19 |
| F1-SCORE | 0.16 |
| SUPPORT | 80 |

**Target Variable: Primary Tumour Site**

MCC: 0.03666276261563587

**Validation Score:** 0.2859276644304535

Confusion Matrix, without normalization

[[ 0 0 0 0 0 0 2]

[ 0 2 0 0 6 0 6]

[ 0 1 2 0 3 0 18]

[ 0 0 0 0 0 0 4]

[ 0 0 1 0 3 0 9]

[ 0 0 0 0 0 0 1]

[ 0 1 4 0 2 0 15]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.28 |
| RECALL | 0.28 |
| F1-SCORE | 0.22 |
| SUPPORT | 80 |

**CLINICAL DATA:**

**Target Variable: Cancer Stage**

MCC: 0.24760984678981005

**Validation score:** 0.46603785061569036

CONFUSION MATRIX:

Confusion Matrix, without normalization

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

[ 0 0 12 0 0 0 0 0 0]

[ 0 3 20 0 0 0 0 0 0]

[ 0 0 3 0 8 0 0 0 0]

[ 0 0 7 1 8 0 0 0 0]

[ 0 0 0 0 1 0 0 0 0]

[ 0 1 0 0 5 0 5 0 0]

[ 0 2 0 0 1 0 0 0 0]

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

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.34 |
| RECALL | 0.41 |
| F1-SCORE | 0.34 |
| SUPPORT | 80 |

**Target Variable: Primary Tumour Site**

MCC: 0.29153885975622684

**Validation Score:** 0.4981177630404304

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 0 0 0 2 0 0]

[ 0 1 0 0 12 0 1]

[ 0 0 18 0 0 0 6]

[ 0 1 1 1 1 0 0]

[ 0 3 1 0 9 0 0]

[ 0 0 0 0 0 1 0]

[ 0 0 15 0 1 0 6]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.44 |
| RECALL | 0.45 |
| F1-SCORE | 0.41 |
| SUPPORT | 80 |

**ALL DATA SETS:**

**Target Variable: Cancer Stage**

MCC: 0.31897363587062566

CONFUSION MATRIX:

Confusion Matrix, without normalization

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

[ 0 4 8 0 0 0 0 0 0]

[ 0 1 22 0 0 0 0 0 0]

[ 0 0 2 1 7 0 1 0 0]

[ 0 0 7 1 6 0 2 0 0]

[ 0 0 0 0 1 0 0 0 0]

[ 0 0 2 1 4 0 4 0 0]

[ 0 0 2 0 0 0 1 0 0]

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

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.43 |
| RECALL | 0.46 |
| F1-SCORE | 0.40 |
| SUPPORT | 80 |

**Target Variable: Primary Tumour Site**

MCC: 0.209324017566568

CONFUSION MATRIX:

Confusion Matrix, without normalization

[[ 0 0 1 0 1 0 0]

[ 0 0 1 0 13 0 0]

[ 0 0 14 0 1 0 9]

[ 0 0 0 0 4 0 0]

[ 0 1 2 0 10 0 0]

[ 0 0 0 0 0 1 0]

[ 0 0 15 0 1 0 6]]

CLASSIFICATION REPORT:

|  |  |
| --- | --- |
| PRECISION | 0.30 |
| RECALL | 0.39 |
| F1-SCORE | 0.32 |
| SUPPORT | 80 |