BC TREE

Unbalanced Data

Average Veracity F1: 0.244

Average stance F1: 0.572

==============charliehebdo==Veracity Report==============

precision recall f1-score support

0 0.00 0.00 0.00 39

1 0.00 0.00 0.00 12

2 0.31 1.00 0.47 23

accuracy 0.31 74

macro avg 0.10 0.33 0.16 74

weighted avg 0.10 0.31 0.15 74

==============charliehebdo==Stance Report==============

precision recall f1-score support

0 0.73 0.06 0.12 172

1 0.73 0.99 0.84 723

2 1.00 0.02 0.04 53

3 1.00 0.02 0.04 54

accuracy 0.73 1002

macro avg 0.87 0.27 0.26 1002

weighted avg 0.76 0.73 0.63 1002

==============sydneysiege==Veracity Report==============

precision recall f1-score support

0 0.00 0.00 0.00 51

1 0.00 0.00 0.00 13

2 0.10 1.00 0.18 7

accuracy 0.10 71

macro avg 0.03 0.33 0.06 71

weighted avg 0.01 0.10 0.02 71

==============sydneysiege==Stance Report==============

precision recall f1-score support

0 0.86 0.04 0.07 155

1 0.68 1.00 0.81 713

2 1.00 0.03 0.06 99

3 1.00 0.03 0.07 86

accuracy 0.69 1053

macro avg 0.89 0.28 0.25 1053

weighted avg 0.77 0.69 0.57 1053

==============germanwings-crash==Veracity Report==============

precision recall f1-score support

0 0.00 0.00 0.00 10

1 0.00 0.00 0.00 12

2 0.12 1.00 0.21 3

accuracy 0.12 25

macro avg 0.04 0.33 0.07 25

weighted avg 0.01 0.12 0.03 25

==============germanwings-crash==Stance Report==============

precision recall f1-score support

0 0.50 0.02 0.04 48

1 0.67 0.99 0.80 174

2 0.00 0.00 0.00 28

3 0.00 0.00 0.00 11

accuracy 0.67 261

macro avg 0.29 0.25 0.21 261

weighted avg 0.54 0.67 0.54 261

==============ferguson==Veracity Report==============

precision recall f1-score support

0 0.00 0.00 0.00 2

2 0.96 1.00 0.98 44

accuracy 0.96 46

macro avg 0.48 0.50 0.49 46

weighted avg 0.91 0.96 0.94 46

==============ferguson==Stance Report==============

precision recall f1-score support

0 1.00 0.01 0.03 139

1 0.69 1.00 0.82 715

2 1.00 0.02 0.04 99

3 1.00 0.02 0.04 89

accuracy 0.69 1042

macro avg 0.92 0.26 0.23 1042

weighted avg 0.79 0.69 0.57 1042

==============ottawashooting==Veracity Report==============

precision recall f1-score support

0 0.00 0.00 0.00 35

1 0.00 0.00 0.00 10

2 0.22 1.00 0.37 13

accuracy 0.22 58

macro avg 0.07 0.33 0.12 58

weighted avg 0.05 0.22 0.08 58

==============ottawashooting==Stance Report==============

precision recall f1-score support

0 0.33 0.03 0.05 106

1 0.67 0.99 0.80 481

2 1.00 0.06 0.12 64

3 1.00 0.03 0.05 73

accuracy 0.67 724

macro avg 0.75 0.28 0.26 724

weighted avg 0.68 0.67 0.55 724

Balanced Data

Average Veracity F1: 0.328

Average stance F1: 0.554

Normalized Veracity Confusion Matrix

|  |  |  |  |
| --- | --- | --- | --- |
|  | T | F | U |
| T | 1 | 0 | 0 |
| F | 1 | 0 | 0 |
| U | 1 | 0 | 0 |

==============charliehebdo==Veracity Report==============

precision recall f1-score support

0 0.53 1.00 0.69 39

1 0.00 0.00 0.00 12

2 0.00 0.00 0.00 23

accuracy 0.53 74

macro avg 0.18 0.33 0.23 74

weighted avg 0.28 0.53 0.36 74

==============charliehebdo==Stance Report==============

precision recall f1-score support

0 0.12 0.10 0.11 172

1 0.72 0.85 0.78 723

2 0.14 0.02 0.03 53

3 0.50 0.02 0.04 54

accuracy 0.63 1002

macro avg 0.37 0.25 0.24 1002

weighted avg 0.58 0.63 0.59 1002

==============sydneysiege==Veracity Report==============

precision recall f1-score support

0 0.72 1.00 0.84 51

1 0.00 0.00 0.00 13

2 0.00 0.00 0.00 7

accuracy 0.72 71

macro avg 0.24 0.33 0.28 71

weighted avg 0.52 0.72 0.60 71

==============sydneysiege==Stance Report==============

precision recall f1-score support

0 0.13 0.11 0.12 155

1 0.67 0.86 0.75 713

2 0.00 0.00 0.00 99

3 1.00 0.01 0.02 86

accuracy 0.60 1053

macro avg 0.45 0.24 0.22 1053

weighted avg 0.56 0.60 0.53 1053

==============germanwings-crash==Veracity Report==============

precision recall f1-score support

0 0.40 1.00 0.57 10

1 0.00 0.00 0.00 12

2 0.00 0.00 0.00 3

accuracy 0.40 25

macro avg 0.13 0.33 0.19 25

weighted avg 0.16 0.40 0.23 25

==============germanwings-crash==Stance Report==============

precision recall f1-score support

0 0.32 0.27 0.29 48

1 0.69 0.87 0.77 174

2 0.00 0.00 0.00 28

3 0.00 0.00 0.00 11

accuracy 0.63 261

macro avg 0.25 0.29 0.27 261

weighted avg 0.52 0.63 0.57 261

==============ferguson==Veracity Report==============

precision recall f1-score support

0 0.04 1.00 0.08 2

2 0.00 0.00 0.00 44

accuracy 0.04 46

macro avg 0.02 0.50 0.04 46

weighted avg 0.00 0.04 0.00 46

==============ferguson==Stance Report==============

precision recall f1-score support

0 0.18 0.18 0.18 139

1 0.70 0.86 0.77 715

2 0.50 0.04 0.07 99

3 0.50 0.02 0.04 89

accuracy 0.62 1042

macro avg 0.47 0.28 0.27 1042

weighted avg 0.59 0.62 0.56 1042

==============ottawashooting==Veracity Report==============

precision recall f1-score support

0 0.60 1.00 0.75 35

1 0.00 0.00 0.00 10

2 0.00 0.00 0.00 13

accuracy 0.60 58

macro avg 0.20 0.33 0.25 58

weighted avg 0.36 0.60 0.45 58

==============ottawashooting==Stance Report==============

precision recall f1-score support

0 0.12 0.12 0.12 106

1 0.66 0.84 0.74 481

2 0.67 0.03 0.06 64

3 1.00 0.03 0.05 73

accuracy 0.58 724

macro avg 0.61 0.26 0.24 724

weighted avg 0.62 0.58 0.52 724

UNLIMITED CHILD TREE UNBALANCED

Avg Veracity F1: 0.312

Avg Stance F1: 0.522

Normalized Veracity Confusion Matrix

|  |  |  |  |
| --- | --- | --- | --- |
|  | T | F | U |
| T | .045 | .003 | .95 |
| F | 0 | .08 | .91 |
| U | 0 | 0 | 1 |

==============charliehebdo==Veracity Report==============

precision recall f1-score support

0 1.00 0.08 0.14 193

1 0.95 0.16 0.27 116

2 0.35 1.00 0.52 149

accuracy 0.40 458

macro avg 0.77 0.41 0.31 458

weighted avg 0.78 0.40 0.30 458

==============charliehebdo==Stance Report==============

precision recall f1-score support

0 0.31 0.12 0.18 214

1 0.67 0.92 0.78 666

2 0.00 0.00 0.00 50

3 0.67 0.03 0.05 72

accuracy 0.64 1002

macro avg 0.41 0.27 0.25 1002

weighted avg 0.56 0.64 0.56 1002

==============sydneysiege==Veracity Report==============

precision recall f1-score support

0 1.00 0.03 0.05 382

1 0.78 0.08 0.15 86

2 0.11 1.00 0.19 54

accuracy 0.14 522

macro avg 0.63 0.37 0.13 522

weighted avg 0.87 0.14 0.08 522

==============sydneysiege==Stance Report==============

precision recall f1-score support

0 0.27 0.09 0.14 174

1 0.65 0.95 0.77 677

2 1.00 0.05 0.09 87

3 1.00 0.03 0.07 115

accuracy 0.63 1053

macro avg 0.73 0.28 0.27 1053

weighted avg 0.65 0.63 0.53 1053

==============germanwings-crash==Veracity Report==============

precision recall f1-score support

0 1.00 0.06 0.12 94

1 1.00 0.08 0.15 111

2 0.15 1.00 0.26 33

accuracy 0.20 238

macro avg 0.72 0.38 0.18 238

weighted avg 0.88 0.20 0.15 238

==============germanwings-crash==Stance Report==============

precision recall f1-score support

0 0.11 0.02 0.03 51

1 0.62 0.96 0.76 163

2 0.00 0.00 0.00 33

3 0.00 0.00 0.00 14

accuracy 0.61 261

macro avg 0.18 0.25 0.20 261

weighted avg 0.41 0.61 0.48 261

==============ferguson==Veracity Report==============

precision recall f1-score support

0 1.00 0.10 0.18 10

1 0.00 0.00 0.00 8

2 0.94 1.00 0.97 266

accuracy 0.94 284

macro avg 0.65 0.37 0.38 284

weighted avg 0.92 0.94 0.91 284

==============ferguson==Stance Report==============

precision recall f1-score support

0 0.24 0.09 0.13 145

1 0.68 0.94 0.79 704

2 0.00 0.00 0.00 85

3 0.29 0.02 0.03 108

accuracy 0.65 1042

macro avg 0.30 0.26 0.24 1042

weighted avg 0.52 0.65 0.55 1042

==============ottawashooting==Veracity Report==============

precision recall f1-score support

0 1.00 0.05 0.09 329

1 0.86 0.08 0.15 72

2 0.15 1.00 0.27 69

accuracy 0.19 470

macro avg 0.67 0.38 0.17 470

weighted avg 0.85 0.19 0.12 470

==============ottawashooting==Stance Report==============

precision recall f1-score support

0 0.28 0.07 0.11 127

1 0.62 0.95 0.75 450

2 0.00 0.00 0.00 65

3 0.00 0.00 0.00 82

accuracy 0.60 724

macro avg 0.23 0.26 0.22 724

weighted avg 0.43 0.60 0.49 724

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Events | Support | Deny | Query | Comment |
| CH | 214 (239) | 72 (58) | 50 (53) | 666 (721) |
| SS | 174 (220) | 115 (89) | 87 (98) | 677 (700) |
| FG | 145 (176) | 108 (91) | 85 (99) | 704 (718) |
| OS | 127 (161) | 82 (76) | 65 (63) | 450 (477) |
| GC | 51 (69) | 14 (11) | 33 (28) | 163 (173) |
| Total | 711 (865) | 391 (325) | 320 (341) | 2650 (2789) |

Normal Tree Unbalanced Data

BERT Encoding

Veracity Avg F1 : 0.226 (0.359)

Stance Avg F1 : 0.49 (0.520)

BC Tree Unbalanced Data

BERT Encoding

Veracity Avg F1 :

Stance Avg F1 :