

Model: top_DecisionTree

HyperParams:

```
{
  "criterion": [
    "entropy"
  ],
  "max_depth": [
    1500,
    1800
  ],
  "min_samples_split": [
    4,
    6,
    8
  ]
}
```

Classifications: Emotions

Confusion Matrix:

View Visual matrix at:

[./precision/confusion_matrix_figures/top_DecisionTree_emotions_2.png](#)

```
[[1138 42 18 52 125 25 13 28 12 13 15 9 1 42
  8 55 2 41 87 0 338 29 4 8 6 2 4 17]
 [ 60 645 20 43 39 4 11 10 11 6 19 7 6 15
  3 8 0 40 11 1 236 8 0 9 0 1 3 17]
 [ 23 34 323 145 34 16 11 35 4 31 37 31 3 7
 11 3 1 5 2 1 265 5 0 10 1 2 7 15]
 [ 62 63 195 305 91 22 51 48 13 59 88 51 10 11
 12 5 4 12 15 3 492 13 0 18 1 5 19 20]
 [183 42 57 123 533 71 44 42 40 44 74 13 12 22
 8 23 2 34 41 2 738 26 0 20 5 5 10 12]
 [ 45 17 22 35 58 124 10 14 7 12 18 0 2 3
 5 9 1 14 13 1 204 33 1 2 0 8 9 2]
 [ 27 31 29 55 53 9 239 114 5 9 28 6 5 6
 4 5 1 2 7 3 297 4 0 9 1 2 1 13]
 [ 36 19 28 61 56 16 136 355 8 7 14 5 3 11
 2 6 0 4 9 0 326 5 1 8 1 1 1 24]
 [ 15 9 9 18 27 12 10 14 103 15 8 1 1 11
 0 0 1 6 16 1 127 23 1 2 1 0 3 5]
 [ 37 24 43 84 65 24 16 12 5 132 54 25 6 6
 10 5 1 4 9 5 322 7 0 10 2 7 43 12]
 [ 40 38 80 153 101 25 70 28 5 69 299 18 9 7
 11 9 3 11 6 2 481 9 0 18 1 7 26 11]
 [ 16 24 59 94 28 5 11 7 4 21 31 106 5 3
 18 2 1 2 1 0 131 4 0 3 0 1 6 2]
 [ 13 11 18 21 21 6 9 6 2 16 10 15 33 1
 2 6 0 2 2 1 91 2 0 2 0 5 4 4]
 [ 77 30 18 25 42 5 14 28 8 7 4 2 0 95
 1 10 0 34 16 3 143 9 0 4 1 0 3 18]
 [ 10 7 14 20 14 5 8 5 4 13 14 9 2 2
 100 1 1 0 1 4 72 3 0 3 2 0 1 2]
 [111 11 6 12 30 16 3 12 2 4 5 0 1 14
 0 1042 0 27 8 0 63 13 2 2 5 12 3 5]
```

```
[ 3 0 2 5 6 2 1 1 0 3 0 1 0 0
 1 0 5 0 0 0 14 0 1 0 0 3 10 0]
[102 98 8 26 53 13 4 7 6 4 11 1 1 34
 4 27 1 193 46 0 149 8 2 6 3 1 4 2]
[135 21 5 21 43 15 10 6 12 4 4 2 0 9
 3 13 0 46 509 0 125 7 0 3 0 2 7 2]
[ 6 3 8 15 16 16 4 3 1 10 8 3 2 0
 13 1 0 2 0 22 46 1 0 1 0 0 4 2]
[552 301 358 621 866 218 334 382 114 259 436 104 36 113
 73 74 10 134 114 28 5474 113 4 152 10 31 74 82]
[ 77 12 19 40 76 41 17 10 45 21 20 2 2 10
 4 14 1 22 8 0 248 209 0 4 1 2 5 4]
[ 38 4 2 4 11 5 5 0 1 5 7 1 0 1
 1 3 0 8 0 0 52 4 1 1 1 0 1 1]
[ 48 41 23 70 106 23 29 20 11 30 44 4 4 8
 8 6 1 13 7 1 374 12 1 48 1 7 14 18]
[ 18 3 2 6 20 10 2 3 0 4 2 0 0 2
 1 6 0 15 3 0 38 2 0 2 16 0 1 0]
[ 5 8 9 14 16 9 5 5 3 16 2 3 7 1
 1 12 1 0 1 0 36 1 0 7 0 91 18 1]
[ 29 14 29 56 37 21 15 7 10 76 41 11 9 4
 10 6 4 9 6 2 187 4 0 7 2 62 136 1]
[ 60 25 25 30 34 6 20 34 2 24 13 8 8 24
 6 6 0 13 2 1 196 2 0 10 0 0 3 139]]
```

Classification Report:

View formatted classification report at:

[./precision/classification_reports/top_DecisionTree_4.txt](#)

	precision	recall	f1-score	support
admiration	0.38	0.53	0.45	2134
amusement	0.41	0.52	0.46	1233
anger	0.23	0.30	0.26	1062
annoyance	0.14	0.18	0.16	1688
approval	0.20	0.24	0.22	2226
caring	0.16	0.19	0.17	669
confusion	0.22	0.25	0.23	965
curiosity	0.29	0.31	0.30	1143
desire	0.24	0.23	0.23	439
disappointment	0.14	0.14	0.14	970
disapproval	0.23	0.19	0.21	1537
disgust	0.24	0.18	0.21	585
embarrassment	0.20	0.11	0.14	303
excitement	0.21	0.16	0.18	597
fear	0.31	0.32	0.31	317
gratitude	0.77	0.74	0.75	1409
grief	0.12	0.09	0.10	58
joy	0.28	0.24	0.26	814
love	0.54	0.51	0.52	1004
nervousness	0.27	0.12	0.16	187
neutral	0.49	0.49	0.49	11067
optimism	0.38	0.23	0.28	914
pride	0.06	0.01	0.01	157
realization	0.13	0.05	0.07	972

relief	0.26	0.10	0.15	156
remorse	0.35	0.33	0.34	272
sadness	0.32	0.17	0.22	795
surprise	0.32	0.20	0.25	691

accuracy		0.36	34364	
macro avg	0.28	0.25	0.26	34364
weighted avg	0.36	0.36	0.36	34364

Classifications: Emotions

Confusion Matrix:

View Visual matrix at:

[./precision/confusion_matrix_figures/top_DecisionTree_sentiments_2.png](#)

```
[[1762 580 923 506]
```

```
 [ 905 4645 1511 713]
```

```
 [1611 2541 5206 1709]
```

```
 [ 866 1335 2520 7031]]
```

Classsification Report:

View formatted classification report at:

[./precision/classification_reports/top_DecisionTree_5.txt](#)

	precision	recall	f1-score	support
--	-----------	--------	----------	---------

ambiguous	0.34	0.47	0.40	3771
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negative	0.51	0.60	0.55	7774
----------	------	------	------	------

neutral	0.51	0.47	0.49	11067
---------	------	------	------	-------

positive	0.71	0.60	0.65	11752
----------	------	------	------	-------

accuracy		0.54		34364
----------	--	------	--	-------

macro avg	0.52	0.53	0.52	34364
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weighted avg	0.56	0.54	0.55	34364
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