

Model: top_DecisionTree

HyperParams:

```
{
  "criterion": [
    "entropy"
  ],
  "max_depth": [
    800,
    1000
  ],
  "min_samples_split": [
    4,
    6,
    8
  ]
}
```

Classifications: Emotions

Confusion Matrix:

View Visual matrix at:

[./precision/confusion_matrix_figures/top_DecisionTree_emotions_1.png](#)

```
[[1133 43 18 55 128 23 13 28 11 12 14 9 1 43
  7 55 2 40 90 0 337 31 4 9 6 1 4 17]
 [ 59 650 22 43 38 4 11 11 11 5 19 6 6 15
  3 8 0 40 12 1 233 7 0 8 0 1 3 17]
 [ 23 36 323 143 36 17 11 35 4 31 36 31 3 6
  11 3 1 5 2 0 265 5 0 10 1 2 7 15]
 [ 61 63 195 300 91 22 53 48 12 59 88 49 10 11
  12 7 4 12 15 3 498 13 0 18 1 5 18 20]
 [181 43 58 125 536 71 42 42 42 46 73 13 12 23
  8 23 2 33 42 2 730 26 0 20 5 5 11 12]
 [ 45 18 23 33 58 124 10 14 6 12 19 0 2 3
  5 9 1 15 14 1 202 33 1 2 0 6 11 2]
 [ 29 28 28 54 52 9 239 115 5 10 29 7 5 6
  4 5 1 2 6 3 298 4 0 9 1 2 1 13]
 [ 36 16 28 63 55 17 136 358 8 7 14 4 3 11
  2 6 0 4 9 0 325 5 1 8 1 1 1 24]
 [ 16 9 9 18 27 12 10 14 107 15 8 1 1 11
  0 0 1 6 16 1 122 23 1 2 1 0 3 5]
 [ 37 23 44 84 66 23 16 13 5 130 55 25 6 6
  10 5 1 4 9 5 320 7 0 10 2 7 45 12]
 [ 40 38 80 153 102 25 70 28 5 69 296 19 9 7
  11 9 3 11 6 2 482 9 0 18 1 8 26 10]
 [ 16 25 59 92 27 5 11 7 4 20 33 106 5 3
  18 2 1 2 1 0 133 4 0 3 0 1 6 1]
 [ 13 11 18 21 21 6 9 6 2 15 10 15 33 1
  2 6 0 2 2 1 90 3 0 2 0 5 4 5]
 [ 77 30 18 26 42 5 14 28 8 7 4 2 0 94
  1 10 0 34 16 3 143 9 0 4 1 0 3 18]
 [ 10 8 14 21 15 5 8 5 4 12 13 10 2 2
  100 1 0 0 1 4 71 3 0 3 2 0 1 2]
 [113 11 6 12 28 16 3 12 2 4 6 0 1 13
  0 1044 0 26 8 0 61 13 2 3 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 1 0 3 9 0]
[ 105 96 8 26 52 13 4 7 6 4 12 1 1 36
 4 27 1 193 47 0 146 7 2 6 3 1 4 2]
[ 139 21 4 21 43 15 10 6 14 4 4 2 0 9
 3 13 0 44 508 0 123 7 0 3 0 2 7 2]
[ 6 4 8 15 16 16 4 3 2 10 8 3 2 0
 13 1 0 2 0 22 44 1 0 1 0 0 4 2]
[ 549 298 364 629 857 217 329 380 118 252 435 108 35 117
 74 74 10 135 115 28 5473 113 4 153 10 31 75 84]
[ 76 12 19 40 76 40 17 10 46 21 20 2 2 10
 4 14 1 23 8 0 248 209 0 4 1 2 5 4]
[ 38 4 2 4 11 5 4 1 1 5 7 1 0 1
 1 3 0 8 0 0 52 4 1 1 1 0 1 1]
[ 47 40 23 70 106 23 28 20 11 30 45 4 4 8
 8 7 1 13 7 1 375 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 11 1 0 1 0 37 1 0 7 0 89 20 1]
[ 30 14 29 57 37 21 15 7 10 74 41 11 9 4
 10 6 4 9 6 2 184 4 0 7 2 61 140 1]
[ 59 24 25 30 37 6 20 34 1 24 15 6 8 24
 6 6 0 13 2 1 195 2 0 10 0 0 3 140]]

```

Classification Report:

View formatted classification report at:

[./precision/classification_reports/top_DecisionTree_2.txt](#)

	precision	recall	f1-score	support
admiration	0.38	0.53	0.44	2134
amusement	0.41	0.53	0.46	1233
anger	0.22	0.30	0.26	1062
annoyance	0.14	0.18	0.16	1688
approval	0.21	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	0.24	0.24	439
disappointment	0.14	0.13	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	0.20	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	0.28	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	0.33	0.18	0.23	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_1.png](#)

```
[[1661 609 981 520]
```

```
 [ 866 4572 1583 753]
```

```
 [1528 2444 5277 1818]
```

```
 [ 820 1328 2509 7095]]
```

Classsification Report:

View formatted classification report at:

[./precision/classification_reports/top_DecisionTree_3.txt](#)

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

ambiguous	0.34	0.44	0.38	3771
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negative	0.51	0.59	0.55	7774
----------	------	------	------	------

neutral	0.51	0.48	0.49	11067
---------	------	------	------	-------

positive	0.70	0.60	0.65	11752
----------	------	------	------	-------

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

macro avg	0.51	0.53	0.52	34364
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weighted avg	0.56	0.54	0.55	34364
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