Test size: 0.8
Model: top_DecisionTree_2.5
HyperParams:
{
    "criterion": [
        "entropy"
    ],
    "max_depth": [
        600,
        800
    ],
    "min_samples_split": [
        4,
        6,
        8
    ]
}

Classifications: Emotions
Confusion Matrix:
View Visual matrix at:
./precision/confusion_matrix_figures/top_DecisionTree_2.5_emotions_0.png
[[ 3400   134    81   212   522    70    85   123    45    63   132    46
     10   187    22   190     2   254   349     1  2226    88    14    32
     10     3    15    90]
 [  286  2136    85   155   171    45    56    48    28    52   121    30
     10    78    22    38     0   206    50     2  1203    17     0    40
      4     7     9    30]
 [  175    67   780   408   193    54    80   108    19   100   164   141
     20    24    23    17     1    21    20    11  1663    29     2    25
      1     9    31    27]
 [  316   187   496   709   396   105   180   223    33   164   351   194
     41    43    46    49     2    72    65    20  2727    42     4    61
      7    15    62    55]
 [  809   210   198   450  1203   198   197   213    68   158   327   103
     31    66    44    77     5   115   165    23  4032    98     4    91
      8    18    48    54]
 [  195    39    69   146   250   328    50    59    37    46    78    32
      8    15     9    45     0    55    42    26  1121    73     3    13
      9    42    25     7]
 [  139    78   103   200   231    51   466   352    19    48   135    41
     13    23    15    14     1    36    38     8  1782    19     1    49
      3     9    19    45]
 [  203    82   129   208   241    81   350   788    31    48   134    36
     14    66    19    19     3    45    60     5  1981    22     1    46
      2     6    17    62]
 [   93    47    42    65   126    41    32    54   353    32    48     8
      2    27    10    12     1    19    46     3   575    85     1    10
      1     8     7     2]
 [  176    85   166   304   258    55    84   107    38   228   212    87
     24    27    32    26     2    38    44    27  1482    35     3    52
      4    38    95    32]
 [  232   123   244   474   467    95   141   136    32   145   643   105

```
    27    44    27    38     1    49    56    18 2818    36     2    69
     4    32    40    42]
[   96    53   193   234   128    28    54    37    13    49   105   313
    20     6    18     5     0    13    18     8   852    20     1    19
     2     9    20    12]
[   62    27    40    90    78     8    27    18     7    33    38    48
    58     3    10     7     1     5    16     5   506     8     0    21
     2    21    11    10]
[  274    68    52    92   144    30    39    84    18    28    38    26
     4   326    27    48     0   112    67     2   813    34     2    20
     4     1     4    60]
[   65    32    41    87    81    32    22    32     5    36    56    25
     7     4   166     4     0    12     9    24   616    11     0    13
     1     1    12    12]
[  348    29    30    74    96    69    24    23    16    20    22     9
     6    52     3  4063     2   103    44     1   417    76     0    20
    28    59    11     6]
[   12     7     7    22     6     9     4     6     3    16     8     4
     2     0     4     1    12     4     2     3   124     0     1     4
     0    17     6     2]
[  370   330    39   119   182    61    42    38    26    50    52    17
     5   159    10   132     0   611   168     1   933    32     3    15
    21     2     8    12]
[  511    62    38    71   146    28    33    48    28    22    49     5
     1    40     6    36     0   106  2071     0   653    22     0     9
     1     2     6     8]
[   20    12    26    56    48    19    19    21     6    23    28     5
     5     5    13     2     0     6     5    39   243     7     0     3
     2     4    14     3]
[ 2384  1002  1318  2297  3156   752  1136  1445   355   795  1581   526
   162   410   252   277    26   511   666    97 23375   421    37   436
    37   113   268   313]
[  276    69    61   155   261   178    68    81   137    51    95    24
    11    38    12    37     0    74    53     5  1132   751     6    23
     2     7    15    16]
[  106    13    13    19    50    14     7     9     5     8    17     3
     1     7     2    10     1    23     8     1   229     9     3     2
     3     0     3     1]
[  219   108   108   223   332    52   123   112    25    89   168    35
    25    50    26    17     3    33    52    13  1742    32     1   103
     5    18    27    57]
[   54    15    12    32    61    28    12     7     1    14    17     3
     0     5     2    42     0    37     6     0   224     8     0     3
    31     0     3     4]
[   47    13    26    36    49    20    21    12     8    63    22    16
    29     3     3    37     1     5     3     4   252     5     1    30
     1   394    68     4]
[  119    49   116   166   186    68    40    52    27   165   122    53
    20    18    25    36    10    32    24    21  1119    27     2    22
     2   185   382     8]
[  196    64    74   140   135    30    72   101    10    38    67    28
    11   123    44    27     0    33    17     5  1040    13     2    34
     2     5    12   436]]
```

Classsification Report:
View formatted classification report at:
./precision/classification_reports/top_DecisionTree_2.5_0.txt

|  | precision | recall | f1-score | support |
|---|---|---|---|---|
| admiration | 0.30 | 0.40 | 0.35 | 8406 |
| amusement | 0.42 | 0.43 | 0.42 | 4929 |
| anger | 0.17 | 0.19 | 0.18 | 4213 |
| annoyance | 0.10 | 0.11 | 0.10 | 6665 |
| approval | 0.13 | 0.13 | 0.13 | 9013 |
| caring | 0.13 | 0.12 | 0.12 | 2822 |
| confusion | 0.13 | 0.12 | 0.13 | 3938 |
| curiosity | 0.18 | 0.17 | 0.17 | 4699 |
| desire | 0.25 | 0.20 | 0.22 | 1750 |
| disappointment | 0.09 | 0.06 | 0.07 | 3761 |
| disapproval | 0.13 | 0.10 | 0.12 | 6140 |
| disgust | 0.16 | 0.13 | 0.15 | 2326 |
| embarrassment | 0.10 | 0.05 | 0.07 | 1160 |
| excitement | 0.18 | 0.13 | 0.15 | 2417 |
| fear | 0.19 | 0.12 | 0.14 | 1406 |
| gratitude | 0.77 | 0.72 | 0.74 | 5651 |
| grief | 0.16 | 0.04 | 0.07 | 286 |
| joy | 0.23 | 0.18 | 0.20 | 3438 |
| love | 0.50 | 0.52 | 0.51 | 4002 |
| nervousness | 0.10 | 0.06 | 0.08 | 634 |
| neutral | 0.42 | 0.53 | 0.47 | 44148 |
| optimism | 0.37 | 0.21 | 0.27 | 3638 |
| pride | 0.03 | 0.01 | 0.01 | 567 |
| realization | 0.08 | 0.03 | 0.04 | 3798 |
| relief | 0.16 | 0.05 | 0.08 | 621 |
| remorse | 0.38 | 0.34 | 0.36 | 1173 |
| sadness | 0.31 | 0.12 | 0.18 | 3096 |
| surprise | 0.31 | 0.16 | 0.21 | 2759 |
|  |  |  |  |  |
| accuracy |  |  | 0.32 | 137456 |
| macro avg | 0.23 | 0.19 | 0.20 | 137456 |
| weighted avg | 0.30 | 0.32 | 0.31 | 137456 |

Classifications: Emotions
Confusion Matrix:
View Visual matrix at:
./precision/confusion_matrix_figures/top_DecisionTree_2.5_sentiments_0.png
[[ 4499  2709  5380  2606]
 [ 3023 13550  9440  4847]
 [ 5237  8883 20723  9305]
 [ 3117  5527 11777 26833]]
Classsification Report:
View formatted classification report at:
./precision/classification_reports/top_DecisionTree_2.5_1.txt

|              | precision | recall | f1-score | support |
|--------------|-----------|--------|----------|---------|
| ambiguous    | 0.28      | 0.30   | 0.29     | 15194   |
| negative     | 0.44      | 0.44   | 0.44     | 30860   |
| neutral      | 0.44      | 0.47   | 0.45     | 44148   |
| positive     | 0.62      | 0.57   | 0.59     | 47254   |
|              |           |        |          |         |
| accuracy     |           |        | 0.48     | 137456  |
| macro avg    | 0.44      | 0.44   | 0.44     | 137456  |
| weighted avg | 0.48      | 0.48   | 0.48     | 137456  |