

Model: top_MultinomialNB_2.5

HyperParams:

```
{  
  "alpha": [  
    0,  
    0.5,  
    1,  
    10  
  ]  
}
```

Classifications: Emotions

Confusion Matrix:

View Visual matrix at:

[./precision/confusion_matrix_figures/top_MultinomialNB_2.5_emotions_1.png](/precision/confusion_matrix_figures/top_MultinomialNB_2.5_emotions_1.png)

```
[[ 2361  48  12  35 154 16 7 29 1 7 27 2  
   0 15 2 151 0 61 119 0 2092 30 0 8  
   0 0 3 41]  
[ 119 1034 14 47 54 3 8 9 2 5 26 1  
  0 5 0 23 0 55 21 0 1668 9 0 8  
  0 0 5 14]  
[ 38 25 348 220 48 11 7 23 1 19 71 30  
  1 4 1 10 0 5 7 0 1713 8 0 12  
  0 1 9 13]  
[ 76 75 154 357 133 15 25 35 3 32 132 31  
  1 4 5 27 0 11 19 0 2932 16 0 23  
  1 7 33 22]  
[ 270 57 24 78 631 41 33 35 8 18 124 15  
  0 10 3 59 0 35 46 0 3959 42 0 40  
  1 2 18 13]  
[ 30 9 9 27 49 156 5 7 0 6 24 1  
  0 0 0 57 0 14 12 0 1261 60 0 3  
  0 8 9 1]  
[ 35 18 9 32 56 5 187 105 2 7 45 4  
  0 2 1 15 0 8 11 0 1881 3 0 18  
  0 0 3 9]  
[ 54 21 8 41 57 7 74 374 2 5 33 3  
  0 9 0 10 0 4 13 0 2148 8 0 16  
  0 1 3 19]  
[ 21 12 6 13 26 6 4 6 66 6 11 1  
  0 3 0 11 0 5 17 0 806 51 0 3  
  0 1 2 3]  
[ 49 23 15 91 81 13 11 9 3 116 64 15  
  1 2 5 13 0 11 16 0 1783 16 0 21  
  1 8 65 15]  
[ 62 39 39 113 158 14 41 15 2 30 405 24  
  2 3 2 18 0 15 11 0 2817 12 0 25  
  1 3 19 10]  
[ 34 11 64 110 41 3 8 3 0 21 53 159  
  3 2 5 2 0 3 5 0 885 8 0 4  
  0 3 7 3]  
[ 12 12 7 39 30 3 7 7 0 9 17 4  
 15 0 3 8 0 0 0 0 544 4 1 10]
```

```

0 3 8 6]
[ 185 17 15 18 46 2 3 18 3 6 8 5
 1 88 2 25 0 115 23 0 908 19 1 12
 0 0 3 30]
[ 23 8 6 21 21 3 1 5 0 7 16 18
 0 2 49 1 0 0 0 2 666 4 0 13
 0 0 14 5]
[ 206 15 1 7 26 16 2 4 0 2 12 0
 0 3 0 2483 0 56 13 0 689 34 0 6
 0 8 6 0]
[ 2 2 2 2 4 3 1 1 0 3 3 1
 0 0 2 4 0 0 1 0 124 0 0 2
 0 3 14 0]
[ 182 154 5 14 63 16 4 7 1 5 7 2
 0 11 1 81 0 342 84 0 1092 15 0 9
 0 1 7 11]
[ 225 22 6 4 35 15 2 8 1 4 10 0
 0 0 0 24 0 46 961 0 1154 9 0 4
 0 1 1 5]
[ 10 2 4 15 18 8 4 4 1 4 6 2
 2 0 3 2 0 0 3 1 311 6 1 1
 0 0 7 3]
[ 839 330 296 555 952 177 246 334 54 200 575 85
 16 81 36 250 2 179 186 0 21384 186 6 194
 7 26 137 137]
[ 98 14 5 18 76 36 13 7 14 6 21 0
 1 1 2 37 0 20 13 0 1460 382 0 4
 1 0 8 3]
[ 63 4 4 7 17 3 1 2 1 2 4 0
 0 0 1 8 0 12 0 0 227 4 1 1
 0 0 2 0]
[ 54 25 15 46 103 9 24 11 2 22 47 2
 2 4 4 13 0 12 9 0 1810 8 0 107
 2 5 10 18]
[ 32 3 3 4 20 8 3 3 0 1 2 0
 0 0 0 22 0 14 3 0 271 3 0 1
 3 0 4 1]
[ 3 6 4 9 17 10 4 2 1 11 11 1
 1 0 0 43 0 1 4 0 434 4 1 12
 0 76 45 1]
[ 28 17 12 47 36 8 1 6 1 52 41 9
 0 0 0 21 0 10 9 0 1357 9 0 11
 0 39 228 5]
[ 105 22 23 39 34 3 13 46 0 10 13 6
 0 12 3 10 0 9 5 0 1172 8 0 16
 0 0 4 186]]

```

Classsification Report:

View formatted classification report at:

[./precision/classification_reports/top_MultinomialNB_2.5_2.txt](#)

precision recall f1-score support

| | | | | |
|------------|------|------|------|------|
| admiration | 0.45 | 0.45 | 0.45 | 5221 |
| amusement | 0.51 | 0.33 | 0.40 | 3130 |

| | | | | |
|----------------|------|------|------|-------|
| anger | 0.31 | 0.13 | 0.19 | 2625 |
| annoyance | 0.18 | 0.09 | 0.12 | 4169 |
| approval | 0.21 | 0.11 | 0.15 | 5562 |
| caring | 0.26 | 0.09 | 0.13 | 1748 |
| confusion | 0.25 | 0.08 | 0.12 | 2456 |
| curiosity | 0.34 | 0.13 | 0.19 | 2910 |
| desire | 0.39 | 0.06 | 0.11 | 1080 |
| disappointment | 0.19 | 0.05 | 0.08 | 2447 |
| disapproval | 0.22 | 0.10 | 0.14 | 3880 |
| disgust | 0.38 | 0.11 | 0.17 | 1437 |
| embarrassment | 0.33 | 0.02 | 0.04 | 749 |
| excitement | 0.34 | 0.06 | 0.10 | 1553 |
| fear | 0.38 | 0.06 | 0.10 | 885 |
| gratitude | 0.72 | 0.69 | 0.71 | 3589 |
| grief | 0.00 | 0.00 | 0.00 | 174 |
| joy | 0.33 | 0.16 | 0.22 | 2114 |
| love | 0.60 | 0.38 | 0.46 | 2537 |
| nervousness | 0.33 | 0.00 | 0.00 | 418 |
| neutral | 0.37 | 0.78 | 0.50 | 27470 |
| optimism | 0.40 | 0.17 | 0.24 | 2240 |
| pride | 0.09 | 0.00 | 0.01 | 364 |
| realization | 0.18 | 0.05 | 0.07 | 2364 |
| relief | 0.18 | 0.01 | 0.01 | 401 |
| remorse | 0.39 | 0.11 | 0.17 | 701 |
| sadness | 0.34 | 0.12 | 0.17 | 1947 |
| surprise | 0.32 | 0.11 | 0.16 | 1739 |
| accuracy | | 0.38 | | 85910 |
| macro avg | 0.32 | 0.16 | 0.19 | 85910 |
| weighted avg | 0.35 | 0.38 | 0.32 | 85910 |

Classifications: Emotions

Confusion Matrix:

View Visual matrix at:

[./precision/confusion_matrix_figures/top_MultinomialNB_2.5_sentiments_1.png](#)

```
[[ 1812  1435  3855  2367]
 [  571  9531  5894  3436]
 [ 1273  4670 13725  7802]
 [  595  2203  5888 20853]]
```

Classsification Report:

View formatted classification report at:

[./precision/classification_reports/top_MultinomialNB_2.5_3.txt](#)

| | precision | recall | f1-score | support |
|--------------|-----------|--------|----------|---------|
| ambiguous | 0.43 | 0.19 | 0.26 | 9469 |
| negative | 0.53 | 0.49 | 0.51 | 19432 |
| neutral | 0.47 | 0.50 | 0.48 | 27470 |
| positive | 0.61 | 0.71 | 0.65 | 29539 |
| accuracy | | | 0.53 | 85910 |
| macro avg | 0.51 | 0.47 | 0.48 | 85910 |
| weighted avg | 0.53 | 0.53 | 0.52 | 85910 |