

Test size: 0.8
 Model: top_MLP_2.5
 HyperParams:

```
{
  "activation": [
    "logistic",
    "tanh",
    "relu",
    "identity"
  ],
  "hidden_layer_sizes": [
    [
      10,
      30
    ],
    [
      10,
      10,
      10
    ]
  ],
  "solver": [
    "adam",
    "sgd"
  ],
  "max_iter": [
    2
  ]
}
```

Classifications: Emotions

Confusion Matrix:

View Visual matrix at:

[./precision/confusion_matrix_figures/top_MLP_2.5_emotions_0.png](#)

```
[[ 2749   26   0   1   1   0   0   0   0   0   2   0
    0   0   0 195   0   0 147   0 5285   0   0   0
    0   0   0   0]
 [ 136 1075   0   0   2   0   0   0   0   0   4   0
    0   0   0  58   0   0  24   0 3630   0   0   0
    0   0   0   0]
 [  20   5   9  19   3   2   0   0   0   0  34   0
    0   0   0  20   0   0  15   0 4086   0   0   0
    0   0   0   0]
 [  65  45   6  24   4   5   2   0   0   0  39   0
    0   0   0  68   0   1  29   0 6377   0   0   0
    0   0   0   0]
 [ 265  57   0   2   2   3   2   0   0   0  24   0
    0   0   0  88   0   0  58   0 8512   0   0   0
    0   0   0   0]
 [  40  14   0   0   3   8   0   0   0   0  16   0
    0   0   0 108   0   1  21   0 2611   0   0   0
    0   0   0   0]
 [  23  15   3   0   4   0  10   0   0   0  29   0
```

| | | | | | | | | | | | | |
|---|-----|-----|---|------|---|----|------|---|-------|---|----|---|
| | 0 | 0 | 0 | 17 | 0 | 0 | 13 | 0 | 3824 | 0 | 0 | 0 |
| [| 35 | 17 | 1 | 7 | 6 | 0 | 4 | 0 | 0 | 0 | 20 | 0 |
| | 0 | 0 | 0 | 23 | 0 | 0 | 11 | 0 | 4574 | 0 | 0 | 0 |
| | 0 | 1 | 0 | 0] | | | | | | | | |
| [| 28 | 13 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 4 | 0 |
| | 0 | 0 | 0 | 57 | 0 | 0 | 28 | 0 | 1615 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |
| [| 37 | 31 | 1 | 4 | 5 | 4 | 0 | 0 | 0 | 0 | 35 | 0 |
| | 0 | 0 | 0 | 39 | 0 | 0 | 12 | 0 | 3593 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |
| [| 38 | 43 | 0 | 8 | 2 | 2 | 0 | 0 | 0 | 0 | 36 | 0 |
| | 0 | 0 | 0 | 41 | 0 | 0 | 19 | 0 | 5951 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |
| [| 20 | 12 | 6 | 14 | 3 | 2 | 0 | 0 | 0 | 0 | 30 | 2 |
| | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 2223 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |
| [| 25 | 14 | 0 | 1 | 2 | 4 | 0 | 0 | 0 | 0 | 9 | 1 |
| | 0 | 0 | 0 | 11 | 0 | 0 | 7 | 0 | 1086 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |
| [| 216 | 12 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 0 |
| | 0 | 0 | 0 | 33 | 0 | 1 | 26 | 0 | 2124 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |
| [| 6 | 11 | 0 | 2 | 4 | 1 | 0 | 0 | 0 | 0 | 25 | 0 |
| | 0 | 0 | 0 | 8 | 0 | 0 | 5 | 0 | 1344 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |
| [| 219 | 27 | 0 | 0 | 4 | 7 | 0 | 0 | 0 | 0 | 10 | 1 |
| | 0 | 0 | 0 | 4297 | 0 | 1 | 14 | 0 | 1068 | 0 | 0 | 0 |
| | 0 | 3 | 0 | 0] | | | | | | | | |
| [| 5 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 260 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |
| [| 232 | 102 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 4 | 1 |
| | 0 | 0 | 0 | 206 | 0 | 5 | 100 | 0 | 2782 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |
| [| 211 | 30 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| | 0 | 0 | 0 | 29 | 0 | 0 | 1475 | 0 | 2251 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |
| [| 1 | 2 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 7 | 0 |
| | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 617 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |
| [| 501 | 256 | 9 | 16 | 4 | 17 | 9 | 0 | 0 | 0 | 89 | 3 |
| | 0 | 0 | 0 | 285 | 0 | 1 | 192 | 0 | 42765 | 0 | 0 | 0 |
| | 0 | 1 | 0 | 0] | | | | | | | | |
| [| 94 | 19 | 0 | 2 | 1 | 11 | 0 | 0 | 0 | 0 | 10 | 3 |
| | 0 | 0 | 0 | 173 | 0 | 0 | 23 | 0 | 3302 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |
| [| 51 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 22 | 0 | 0 | 3 | 0 | 486 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |
| [| 62 | 27 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 13 | 0 |
| | 0 | 0 | 0 | 24 | 0 | 0 | 7 | 0 | 3661 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0] | | | | | | | | |

```
[ 23  4  0  0  0  0  0  0  0  0  0  0  0
  0  0  0 66  0  0  4  0 524  0  0  0
  0  0  0  0]
[ 22 93  0  1 24 28  0  0  0  0 37  5
  0  0  0 123  0  2  5  0 827  0  0  0
  0  6  0  0]
[ 26 64  1  4 13 15  0  0  0  0 60  3
  0  0  0  91  0  1  8  0 2807  0  0  0
  0  3  0  0]
[ 159 13  0  8  6  0  0  0  0  0  8  0
  0  0  0  21  0  0 12  0 2532  0  0  0
  0  0  0  0]]
```

Classssification Report:

View formatted classification report at:

[./precision/classification_reports/top_MLP_2.5_0.txt](#)

| | precision | recall | f1-score | support |
|----------------|-----------|--------|----------|---------|
| admiration | 0.52 | 0.33 | 0.40 | 8406 |
| amusement | 0.53 | 0.22 | 0.31 | 4929 |
| anger | 0.23 | 0.00 | 0.00 | 4213 |
| annoyance | 0.21 | 0.00 | 0.01 | 6665 |
| approval | 0.02 | 0.00 | 0.00 | 9013 |
| caring | 0.06 | 0.00 | 0.01 | 2822 |
| confusion | 0.36 | 0.00 | 0.01 | 3938 |
| curiosity | 0.00 | 0.00 | 0.00 | 4699 |
| desire | 0.00 | 0.00 | 0.00 | 1750 |
| disappointment | 0.00 | 0.00 | 0.00 | 3761 |
| disapproval | 0.07 | 0.01 | 0.01 | 6140 |
| disgust | 0.11 | 0.00 | 0.00 | 2326 |
| embarrassment | 0.00 | 0.00 | 0.00 | 1160 |
| excitement | 0.00 | 0.00 | 0.00 | 2417 |
| fear | 0.00 | 0.00 | 0.00 | 1406 |
| gratitude | 0.70 | 0.76 | 0.73 | 5651 |
| grief | 0.00 | 0.00 | 0.00 | 286 |
| joy | 0.38 | 0.00 | 0.00 | 3438 |
| love | 0.65 | 0.37 | 0.47 | 4002 |
| nervousness | 0.00 | 0.00 | 0.00 | 634 |
| neutral | 0.35 | 0.97 | 0.52 | 44148 |
| optimism | 0.00 | 0.00 | 0.00 | 3638 |
| pride | 0.00 | 0.00 | 0.00 | 567 |
| realization | 0.00 | 0.00 | 0.00 | 3798 |
| relief | 0.00 | 0.00 | 0.00 | 621 |
| remorse | 0.43 | 0.01 | 0.01 | 1173 |
| sadness | 0.00 | 0.00 | 0.00 | 3096 |
| surprise | 0.00 | 0.00 | 0.00 | 2759 |
| accuracy | | 0.38 | | 137456 |
| macro avg | 0.16 | 0.10 | 0.09 | 137456 |
| weighted avg | 0.26 | 0.38 | 0.25 | 137456 |

Classifications: Emotions

Confusion Matrix:

View Visual matrix at:

[./precision/confusion_matrix_figures/top_MLP_2.5_sentiments_0.png](#)

```
[[ 2400 1919 7655 3220]
 [ 806 12083 12855 5116]
 [ 1488 5494 26613 10553]
 [ 692 2769 11993 31800]]
```

Classsification Report:

View formatted classification report at:

[./precision/classification_reports/top_MLP_2.5_1.txt](#)

| | precision | recall | f1-score | support |
|--------------|-----------|--------|----------|---------|
| ambiguous | 0.45 | 0.16 | 0.23 | 15194 |
| negative | 0.54 | 0.39 | 0.45 | 30860 |
| neutral | 0.45 | 0.60 | 0.52 | 44148 |
| positive | 0.63 | 0.67 | 0.65 | 47254 |
| accuracy | | 0.53 | | 137456 |
| macro avg | 0.52 | 0.46 | 0.46 | 137456 |
| weighted avg | 0.53 | 0.53 | 0.52 | 137456 |