BASE-MNB Emotions Model

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 930 | 15 | 3 | 9 | 52 | 4 | 2 | 6 | 0 | 3 | 5 | 1 | 0 | 1 | 0 | 54 | 0 | 14 | 46 | 0 | 985 | 11 | 0 | 0 | 0 | 0 | 2 | 10 |
| 42 | 368 | 6 | 22 | 12 | 0 | 2 | 4 | 1 | 1 | 6 | 1 | 0 | 1 | 0 | 11 | 0 | 11 | 8 | 0 | 704 | 6 | 0 | 2 | 0 | 0 | 0 | 4 |
| 13 | 6 | 115 | 67 | 9 | 2 | 0 | 3 | 1 | 6 | 15 | 5 | 0 | 0 | 1 | 4 | 0 | 2 | 3 | 0 | 748 | 5 | 0 | 1 | 0 | 0 | 3 | 2 |
| 29 | 18 | 36 | 111 | 41 | 4 | 12 | 7 | 0 | 10 | 35 | 5 | 1 | 2 | 0 | 11 | 0 | 2 | 2 | 0 | 1323 | 6 | 0 | 7 | 0 | 0 | 8 | 11 |
| 118 | 20 | 2 | 21 | 221 | 9 | 11 | 14 | 2 | 6 | 31 | 6 | 0 | 4 | 1 | 14 | 0 | 9 | 14 | 0 | 1719 | 19 | 0 | 6 | 0 | 1 | 4 | 1 |
| 11 | 0 | 0 | 6 | 15 | 44 | 1 | 2 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 15 | 0 | 4 | 2 | 0 | 574 | 13 | 0 | 0 | 0 | 0 | 1 | 0 |
| 12 | 5 | 1 | 12 | 15 | 0 | 48 | 31 | 1 | 3 | 8 | 0 | 0 | 0 | 1 | 5 | 0 | 1 | 2 | 0 | 856 | 2 | 0 | 2 | 0 | 0 | 0 | 2 |
| 13 | 4 | 2 | 3 | 23 | 3 | 14 | 128 | 1 | 1 | 14 | 0 | 0 | 3 | 0 | 5 | 0 | 3 | 4 | 0 | 920 | 3 | 0 | 5 | 0 | 1 | 0 | 1 |
| 7 | 6 | 3 | 4 | 11 | 1 | 1 | 0 | 15 | 2 | 3 | 0 | 0 | 1 | 0 | 3 | 0 | 3 | 8 | 0 | 353 | 16 | 0 | 0 | 0 | 0 | 0 | 3 |
| 19 | 6 | 5 | 30 | 21 | 4 | 2 | 1 | 0 | 32 | 16 | 3 | 0 | 1 | 0 | 3 | 0 | 0 | 2 | 0 | 770 | 3 | 0 | 4 | 0 | 2 | 13 | 4 |
| 15 | 12 | 14 | 43 | 44 | 1 | 9 | 1 | 0 | 9 | 139 | 4 | 0 | 0 | 0 | 7 | 0 | 0 | 3 | 0 | 1192 | 6 | 0 | 3 | 0 | 0 | 3 | 1 |
| 11 | 0 | 21 | 24 | 8 | 0 | 1 | 1 | 0 | 5 | 12 | 47 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 424 | 2 | 0 | 3 | 0 | 1 | 0 | 1 |
| 4 | 4 | 3 | 13 | 4 | 0 | 0 | 0 | 0 | 2 | 6 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 261 | 0 | 0 | 4 | 0 | 0 | 0 | 2 |
| 58 | 9 | 4 | 5 | 13 | 0 | 2 | 4 | 1 | 1 | 4 | 0 | 0 | 23 | 0 | 13 | 0 | 36 | 5 | 0 | 405 | 5 | 0 | 1 | 0 | 0 | 2 | 9 |
| 14 | 3 | 1 | 5 | 7 | 0 | 1 | 3 | 0 | 3 | 4 | 2 | 0 | 1 | 12 | 0 | 0 | 1 | 1 | 0 | 298 | 0 | 0 | 3 | 0 | 0 | 2 | 2 |
| 73 | 3 | 0 | 6 | 14 | 6 | 1 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 982 | 0 | 23 | 3 | 0 | 337 | 8 | 0 | 2 | 0 | 2 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |
| 67 | 56 | 1 | 4 | 22 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 6 | 0 | 32 | 0 | 98 | 35 | 0 | 526 | 3 | 0 | 0 | 0 | 0 | 1 | 2 |
| 76 | 3 | 1 | 5 | 9 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 10 | 318 | 0 | 512 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 2 | 0 | 0 | 3 | 6 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 138 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 292 | 104 | 99 | 144 | 293 | 34 | 61 | 82 | 11 | 47 | 195 | 13 | 1 | 26 | 5 | 68 | 0 | 48 | 60 | 0 | 9319 | 46 | 2 | 35 | 0 | 3 | 31 | 31 |
| 44 | 4 | 0 | 3 | 27 | 6 | 2 | 3 | 3 | 2 | 3 | 1 | 0 | 2 | 0 | 13 | 0 | 2 | 0 | 0 | 646 | 116 | 0 | 1 | 0 | 0 | 1 | 0 |
| 24 | 0 | 0 | 1 | 4 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 102 | 2 | 0 | 2 | 0 | 0 | 0 | 0 |
| 19 | 9 | 5 | 13 | 25 | 1 | 4 | 4 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 4 | 0 | 863 | 3 | 0 | 28 | 0 | 1 | 1 | 6 |
| 10 | 1 | 2 | 0 | 10 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 11 | 0 | 1 | 0 | 0 | 106 | 2 | 0 | 1 | 0 | 0 | 1 | 1 |
| 5 | 0 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 21 | 0 | 0 | 2 | 0 | 180 | 1 | 0 | 4 | 0 | 17 | 14 | 0 |
| 5 | 5 | 2 | 8 | 12 | 5 | 0 | 1 | 0 | 11 | 10 | 1 | 0 | 1 | 0 | 11 | 0 | 5 | 0 | 0 | 678 | 5 | 0 | 0 | 0 | 4 | 57 | 1 |
| 27 | 8 | 8 | 11 | 11 | 5 | 6 | 11 | 0 | 2 | 6 | 0 | 0 | 4 | 1 | 6 | 0 | 2 | 0 | 0 | 518 | 2 | 0 | 7 | 0 | 0 | 0 | 37 |

Base Emotions Decision Tree Model

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1192 | 54 | 17 | 35 | 134 | 25 | 8 | 21 | 13 | 14 | 21 | 5 | 4 | 52 | 3 | 59 | 0 | 40 | 84 | 2 | 285 | 24 | 8 | 12 | 7 | 2 | 8 | 24 |
| 60 | 682 | 17 | 51 | 42 | 5 | 13 | 6 | 3 | 11 | 20 | 7 | 3 | 18 | 3 | 9 | 2 | 45 | 10 | 1 | 174 | 6 | 0 | 7 | 3 | 3 | 2 | 9 |
| 20 | 20 | 349 | 136 | 31 | 14 | 15 | 17 | 7 | 39 | 44 | 44 | 7 | 4 | 10 | 3 | 0 | 5 | 4 | 0 | 207 | 7 | 1 | 6 | 1 | 3 | 9 | 8 |
| 66 | 80 | 203 | 376 | 116 | 27 | 41 | 38 | 7 | 64 | 112 | 38 | 17 | 12 | 10 | 5 | 2 | 11 | 5 | 4 | 377 | 10 | 0 | 13 | 5 | 7 | 20 | 15 |
| 208 | 65 | 48 | 151 | 611 | 55 | 51 | 40 | 29 | 45 | 74 | 18 | 12 | 26 | 8 | 14 | 1 | 31 | 33 | 3 | 625 | 35 | 3 | 34 | 10 | 2 | 8 | 13 |
| 33 | 18 | 16 | 43 | 75 | 174 | 5 | 10 | 12 | 14 | 19 | 1 | 1 | 3 | 3 | 11 | 2 | 6 | 12 | 4 | 192 | 23 | 4 | 5 | 3 | 1 | 6 | 0 |
| 23 | 23 | 26 | 53 | 64 | 5 | 281 | 132 | 5 | 26 | 34 | 3 | 7 | 6 | 2 | 2 | 2 | 3 | 7 | 3 | 267 | 2 | 3 | 16 | 0 | 4 | 4 | 4 |
| 31 | 11 | 26 | 64 | 54 | 18 | 185 | 390 | 10 | 10 | 17 | 7 | 5 | 17 | 2 | 9 | 0 | 3 | 9 | 2 | 262 | 2 | 0 | 6 | 0 | 2 | 0 | 9 |
| 12 | 12 | 10 | 22 | 45 | 21 | 5 | 16 | 110 | 9 | 9 | 3 | 1 | 8 | 1 | 3 | 0 | 5 | 17 | 2 | 92 | 23 | 1 | 3 | 1 | 0 | 5 | 4 |
| 21 | 25 | 50 | 126 | 68 | 29 | 18 | 8 | 12 | 135 | 72 | 23 | 11 | 3 | 8 | 2 | 3 | 10 | 2 | 5 | 223 | 9 | 2 | 13 | 1 | 8 | 42 | 12 |
| 38 | 39 | 83 | 175 | 143 | 24 | 47 | 22 | 14 | 67 | 369 | 21 | 5 | 4 | 3 | 4 | 1 | 9 | 2 | 4 | 369 | 12 | 0 | 17 | 2 | 4 | 12 | 16 |
| 13 | 11 | 73 | 92 | 25 | 4 | 8 | 1 | 4 | 45 | 37 | 109 | 6 | 2 | 11 | 1 | 0 | 1 | 4 | 1 | 96 | 4 | 1 | 5 | 0 | 2 | 4 | 4 |
| 4 | 14 | 10 | 49 | 19 | 4 | 10 | 8 | 5 | 14 | 24 | 15 | 46 | 1 | 5 | 0 | 2 | 1 | 0 | 1 | 62 | 1 | 0 | 4 | 0 | 2 | 3 | 6 |
| 78 | 36 | 12 | 23 | 43 | 9 | 12 | 29 | 9 | 9 | 12 | 2 | 3 | 110 | 0 | 14 | 0 | 38 | 10 | 2 | 115 | 7 | 0 | 4 | 0 | 1 | 1 | 21 |
| 9 | 8 | 17 | 29 | 14 | 8 | 5 | 10 | 0 | 13 | 15 | 9 | 5 | 3 | 125 | 1 | 4 | 0 | 2 | 5 | 64 | 3 | 0 | 5 | 0 | 1 | 5 | 3 |
| 117 | 10 | 4 | 16 | 27 | 25 | 2 | 5 | 6 | 6 | 7 | 0 | 1 | 17 | 0 | 1071 | 0 | 35 | 7 | 1 | 61 | 16 | 0 | 5 | 6 | 13 | 1 | 7 |
| 1 | 1 | 6 | 7 | 4 | 1 | 0 | 2 | 2 | 2 | 4 | 1 | 1 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 23 | 0 | 0 | 2 | 0 | 2 | 6 | 0 |
| 108 | 102 | 9 | 17 | 63 | 19 | 7 | 8 | 5 | 14 | 10 | 5 | 1 | 51 | 4 | 24 | 0 | 217 | 52 | 1 | 110 | 6 | 5 | 4 | 6 | 0 | 2 | 6 |
| 122 | 14 | 3 | 14 | 50 | 17 | 7 | 3 | 11 | 8 | 10 | 2 | 3 | 13 | 0 | 10 | 1 | 47 | 509 | 0 | 90 | 3 | 0 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 2 | 16 | 22 | 10 | 2 | 4 | 0 | 15 | 5 | 1 | 5 | 1 | 5 | 0 | 0 | 0 | 1 | 21 | 32 | 0 | 1 | 3 | 0 | 0 | 4 | 0 |
| 473 | 339 | 407 | 742 | 1082 | 247 | 390 | 423 | 135 | 303 | 530 | 115 | 55 | 144 | 50 | 81 | 21 | 146 | 133 | 33 | 4769 | 101 | 14 | 122 | 14 | 26 | 69 | 86 |
| 78 | 11 | 10 | 40 | 80 | 54 | 16 | 14 | 44 | 15 | 23 | 2 | 2 | 16 | 5 | 24 | 0 | 9 | 9 | 1 | 195 | 211 | 2 | 12 | 0 | 1 | 4 | 1 |
| 21 | 1 | 6 | 4 | 19 | 3 | 3 | 1 | 0 | 6 | 3 | 0 | 0 | 1 | 0 | 4 | 0 | 9 | 0 | 0 | 45 | 9 | 9 | 0 | 0 | 0 | 0 | 0 |
| 51 | 35 | 42 | 93 | 120 | 15 | 31 | 16 | 12 | 31 | 45 | 10 | 8 | 10 | 5 | 6 | 1 | 7 | 11 | 3 | 344 | 11 | 1 | 69 | 1 | 6 | 6 | 18 |
| 11 | 3 | 4 | 4 | 29 | 8 | 4 | 1 | 2 | 7 | 2 | 0 | 1 | 0 | 0 | 12 | 0 | 12 | 2 | 0 | 29 | 3 | 0 | 1 | 12 | 0 | 1 | 1 |
| 6 | 1 | 7 | 15 | 16 | 12 | 2 | 1 | 3 | 14 | 9 | 2 | 10 | 1 | 0 | 14 | 4 | 1 | 1 | 1 | 30 | 2 | 0 | 9 | 0 | 83 | 18 | 0 |
| 19 | 23 | 33 | 80 | 47 | 31 | 17 | 10 | 7 | 95 | 45 | 10 | 9 | 4 | 7 | 7 | 8 | 6 | 5 | 3 | 162 | 3 | 0 | 16 | 1 | 35 | 133 | 6 |
| 45 | 22 | 21 | 37 | 46 | 5 | 36 | 38 | 3 | 16 | 15 | 8 | 9 | 19 | 1 | 4 | 1 | 7 | 1 | 3 | 175 | 5 | 0 | 16 | 0 | 0 | 3 | 136 |

BASE-MLP Sentiments Model

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1030 | 35 | 5 | 1 | 20 | 6 | 3 | 5 | 4 | 0 | 5 | 2 | 0 | 7 | 1 | 37 | 0 | 39 | 69 | 0 | 817 | 22 | 0 | 0 | 0 | 1 | 4 | 40 |
| 32 | 719 | 6 | 7 | 4 | 0 | 0 | 6 | 4 | 0 | 1 | 2 | 0 | 3 | 1 | 12 | 0 | 15 | 14 | 0 | 371 | 4 | 0 | 0 | 0 | 1 | 0 | 10 |
| 11 | 9 | 184 | 46 | 8 | 4 | 1 | 4 | 2 | 2 | 7 | 15 | 0 | 0 | 1 | 5 | 0 | 5 | 6 | 0 | 683 | 6 | 0 | 0 | 0 | 2 | 3 | 7 |
| 27 | 48 | 76 | 55 | 9 | 3 | 7 | 11 | 0 | 2 | 32 | 14 | 1 | 0 | 1 | 6 | 0 | 3 | 8 | 0 | 1335 | 9 | 0 | 0 | 0 | 14 | 7 | 13 |
| 120 | 44 | 3 | 5 | 140 | 13 | 10 | 17 | 8 | 3 | 24 | 6 | 0 | 2 | 3 | 19 | 0 | 25 | 31 | 0 | 1738 | 23 | 0 | 0 | 0 | 7 | 5 | 7 |
| 21 | 12 | 0 | 3 | 4 | 40 | 4 | 4 | 9 | 1 | 7 | 0 | 0 | 0 | 1 | 7 | 0 | 12 | 8 | 0 | 516 | 31 | 0 | 0 | 0 | 9 | 6 | 1 |
| 16 | 19 | 9 | 5 | 7 | 0 | 80 | 47 | 1 | 0 | 9 | 0 | 0 | 1 | 0 | 3 | 0 | 3 | 3 | 0 | 786 | 2 | 0 | 0 | 0 | 5 | 1 | 10 |
| 17 | 15 | 2 | 0 | 9 | 3 | 7 | 144 | 0 | 0 | 5 | 2 | 0 | 3 | 1 | 9 | 0 | 2 | 6 | 0 | 893 | 6 | 0 | 0 | 0 | 4 | 0 | 23 |
| 9 | 8 | 1 | 0 | 6 | 5 | 1 | 0 | 93 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 7 | 17 | 0 | 258 | 30 | 0 | 0 | 0 | 0 | 0 | 1 |
| 11 | 15 | 10 | 8 | 13 | 5 | 1 | 7 | 10 | 15 | 15 | 8 | 0 | 1 | 1 | 5 | 0 | 2 | 9 | 0 | 760 | 4 | 0 | 1 | 0 | 9 | 27 | 4 |
| 15 | 31 | 14 | 15 | 31 | 3 | 12 | 4 | 2 | 2 | 91 | 7 | 0 | 1 | 1 | 7 | 0 | 5 | 7 | 0 | 1231 | 10 | 0 | 0 | 0 | 5 | 6 | 6 |
| 7 | 3 | 33 | 13 | 2 | 1 | 1 | 1 | 1 | 1 | 10 | 80 | 0 | 0 | 3 | 1 | 0 | 0 | 2 | 0 | 395 | 1 | 0 | 0 | 0 | 0 | 4 | 5 |
| 3 | 6 | 5 | 8 | 1 | 0 | 0 | 3 | 1 | 1 | 5 | 6 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 249 | 1 | 0 | 0 | 0 | 8 | 3 | 6 |
| 57 | 15 | 5 | 0 | 8 | 2 | 2 | 10 | 3 | 1 | 1 | 0 | 0 | 37 | 0 | 14 | 0 | 44 | 15 | 0 | 340 | 6 | 0 | 0 | 0 | 2 | 1 | 37 |
| 5 | 8 | 0 | 4 | 1 | 2 | 0 | 4 | 0 | 0 | 1 | 7 | 0 | 0 | 64 | 1 | 0 | 1 | 1 | 0 | 253 | 5 | 0 | 0 | 0 | 1 | 2 | 3 |
| 86 | 9 | 0 | 3 | 2 | 5 | 2 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 2 | 1142 | 0 | 48 | 5 | 0 | 116 | 19 | 0 | 0 | 0 | 17 | 2 | 4 |
| 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 58 | 1 | 0 | 0 | 0 | 4 | 0 | 0 |
| 61 | 103 | 0 | 0 | 8 | 2 | 0 | 2 | 3 | 1 | 1 | 0 | 0 | 6 | 1 | 24 | 0 | 226 | 50 | 0 | 353 | 5 | 0 | 0 | 0 | 0 | 2 | 8 |
| 51 | 4 | 1 | 3 | 1 | 0 | 0 | 2 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 3 | 0 | 12 | 571 | 0 | 279 | 6 | 0 | 0 | 0 | 3 | 0 | 1 |
| 0 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 140 | 1 | 0 | 0 | 0 | 0 | 4 | 0 |
| 243 | 208 | 88 | 48 | 101 | 34 | 38 | 123 | 42 | 7 | 97 | 22 | 0 | 10 | 6 | 57 | 0 | 76 | 113 | 0 | 9527 | 83 | 0 | 1 | 0 | 28 | 37 | 61 |
| 48 | 14 | 0 | 2 | 12 | 6 | 2 | 4 | 14 | 0 | 4 | 0 | 0 | 3 | 0 | 14 | 0 | 11 | 6 | 0 | 460 | 271 | 0 | 0 | 0 | 1 | 4 | 3 |
| 22 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 6 | 0 | 0 | 105 | 3 | 0 | 0 | 0 | 0 | 1 | 1 |
| 19 | 19 | 5 | 8 | 13 | 2 | 5 | 3 | 3 | 3 | 8 | 5 | 0 | 1 | 4 | 2 | 0 | 2 | 13 | 0 | 843 | 6 | 0 | 8 | 0 | 8 | 2 | 26 |
| 9 | 1 | 1 | 0 | 3 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 11 | 2 | 0 | 101 | 3 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5 | 2 | 1 | 0 | 2 | 1 | 0 | 0 | 5 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 99 | 1 | 0 | 0 | 0 | 128 | 10 | 0 |
| 7 | 15 | 3 | 2 | 12 | 5 | 1 | 1 | 5 | 5 | 13 | 2 | 0 | 0 | 2 | 1 | 0 | 8 | 8 | 0 | 540 | 8 | 0 | 0 | 0 | 60 | 120 | 4 |
| 27 | 11 | 6 | 0 | 4 | 0 | 4 | 11 | 2 | 1 | 3 | 2 | 0 | 2 | 0 | 5 | 0 | 4 | 3 | 0 | 423 | 4 | 0 | 0 | 0 | 0 | 3 | 157 |

MNB Emotions Model with GridSearch

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1081 | 28 | 7 | 15 | 80 | 14 | 4 | 15 | 2 | 4 | 11 | 1 | 0 | 9 | 0 | 67 | 0 | 28 | 75 | 0 | 649 | 24 | 2 | 4 | 0 | 1 | 5 | 27 |
| 45 | 538 | 9 | 28 | 20 | 3 | 3 | 10 | 1 | 2 | 9 | 1 | 0 | 4 | 0 | 11 | 0 | 29 | 13 | 0 | 469 | 5 | 0 | 4 | 0 | 0 | 3 | 5 |
| 22 | 9 | 197 | 89 | 15 | 11 | 4 | 11 | 3 | 11 | 32 | 17 | 0 | 2 | 2 | 4 | 0 | 3 | 6 | 0 | 543 | 7 | 0 | 11 | 0 | 0 | 9 | 3 |
| 39 | 35 | 71 | 193 | 52 | 13 | 32 | 15 | 0 | 22 | 68 | 12 | 1 | 7 | 1 | 13 | 0 | 8 | 4 | 0 | 1022 | 13 | 0 | 16 | 1 | 2 | 18 | 23 |
| 143 | 38 | 8 | 49 | 305 | 34 | 25 | 26 | 11 | 11 | 56 | 8 | 1 | 7 | 4 | 27 | 0 | 21 | 22 | 0 | 1389 | 34 | 0 | 19 | 0 | 2 | 4 | 9 |
| 14 | 1 | 2 | 13 | 34 | 107 | 1 | 4 | 2 | 5 | 15 | 0 | 1 | 1 | 1 | 19 | 0 | 7 | 4 | 0 | 426 | 31 | 0 | 2 | 1 | 1 | 4 | 0 |
| 22 | 10 | 5 | 16 | 24 | 4 | 117 | 68 | 1 | 7 | 24 | 2 | 0 | 1 | 1 | 8 | 0 | 1 | 2 | 1 | 669 | 4 | 0 | 8 | 0 | 1 | 1 | 10 |
| 24 | 11 | 7 | 11 | 33 | 8 | 31 | 208 | 1 | 3 | 22 | 1 | 0 | 11 | 1 | 9 | 0 | 3 | 5 | 0 | 733 | 6 | 0 | 11 | 0 | 1 | 0 | 11 |
| 12 | 8 | 6 | 4 | 17 | 6 | 2 | 2 | 47 | 2 | 6 | 3 | 0 | 2 | 0 | 5 | 0 | 7 | 12 | 1 | 258 | 35 | 0 | 0 | 0 | 1 | 1 | 3 |
| 14 | 11 | 12 | 45 | 30 | 11 | 5 | 5 | 2 | 74 | 34 | 9 | 0 | 3 | 1 | 9 | 0 | 5 | 4 | 0 | 596 | 5 | 0 | 15 | 0 | 3 | 38 | 10 |
| 23 | 17 | 26 | 71 | 76 | 13 | 20 | 5 | 1 | 18 | 212 | 15 | 2 | 0 | 2 | 7 | 0 | 4 | 5 | 0 | 944 | 10 | 1 | 16 | 0 | 1 | 13 | 4 |
| 10 | 4 | 37 | 41 | 13 | 2 | 4 | 2 | 0 | 10 | 23 | 86 | 4 | 0 | 6 | 1 | 0 | 1 | 4 | 0 | 300 | 5 | 1 | 3 | 0 | 1 | 2 | 4 |
| 6 | 8 | 5 | 20 | 8 | 1 | 6 | 1 | 0 | 7 | 9 | 6 | 16 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 198 | 2 | 0 | 5 | 0 | 1 | 3 | 3 |
| 74 | 11 | 8 | 7 | 15 | 1 | 3 | 10 | 5 | 2 | 9 | 0 | 1 | 46 | 1 | 14 | 0 | 43 | 13 | 0 | 306 | 7 | 0 | 1 | 0 | 0 | 3 | 20 |
| 13 | 7 | 1 | 8 | 9 | 0 | 2 | 5 | 0 | 5 | 6 | 5 | 1 | 2 | 39 | 0 | 0 | 1 | 1 | 0 | 236 | 4 | 0 | 8 | 0 | 1 | 6 | 3 |
| 81 | 6 | 0 | 6 | 13 | 8 | 1 | 4 | 0 | 0 | 9 | 0 | 0 | 1 | 2 | 1089 | 0 | 35 | 7 | 0 | 178 | 17 | 0 | 2 | 0 | 3 | 2 | 2 |
| 1 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 52 | 1 | 0 | 0 | 1 | 2 | 4 | 0 |
| 78 | 75 | 2 | 5 | 25 | 8 | 2 | 3 | 1 | 2 | 5 | 0 | 0 | 17 | 0 | 42 | 0 | 164 | 47 | 0 | 367 | 5 | 0 | 2 | 0 | 0 | 4 | 2 |
| 84 | 5 | 2 | 5 | 13 | 1 | 0 | 2 | 0 | 3 | 6 | 0 | 0 | 3 | 0 | 4 | 0 | 23 | 443 | 0 | 342 | 2 | 0 | 1 | 0 | 1 | 0 | 2 |
| 2 | 1 | 3 | 6 | 7 | 3 | 1 | 0 | 0 | 3 | 2 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 114 | 0 | 0 | 2 | 0 | 0 | 4 | 1 |
| 381 | 179 | 156 | 268 | 408 | 114 | 143 | 187 | 31 | 107 | 324 | 43 | 10 | 51 | 26 | 100 | 1 | 102 | 107 | 3 | 7928 | 106 | 5 | 97 | 2 | 9 | 83 | 79 |
| 55 | 5 | 0 | 9 | 34 | 26 | 5 | 4 | 4 | 6 | 13 | 3 | 0 | 3 | 1 | 20 | 0 | 7 | 1 | 0 | 467 | 204 | 0 | 7 | 0 | 1 | 2 | 2 |
| 25 | 0 | 2 | 3 | 2 | 0 | 1 | 1 | 0 | 2 | 2 | 0 | 0 | 1 | 1 | 5 | 0 | 4 | 0 | 0 | 88 | 3 | 1 | 3 | 0 | 0 | 0 | 0 |
| 31 | 14 | 9 | 19 | 49 | 13 | 16 | 8 | 0 | 17 | 19 | 0 | 1 | 2 | 2 | 6 | 0 | 3 | 7 | 0 | 699 | 7 | 0 | 56 | 0 | 4 | 6 | 20 |
| 11 | 1 | 2 | 1 | 13 | 3 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 18 | 0 | 3 | 2 | 0 | 80 | 5 | 0 | 2 | 2 | 0 | 1 | 1 |
| 4 | 0 | 2 | 2 | 7 | 8 | 1 | 0 | 3 | 4 | 3 | 2 | 1 | 0 | 0 | 17 | 0 | 0 | 3 | 0 | 137 | 1 | 0 | 3 | 0 | 40 | 23 | 1 |
| 3 | 11 | 7 | 23 | 15 | 14 | 2 | 4 | 2 | 34 | 21 | 5 | 0 | 1 | 2 | 15 | 0 | 6 | 1 | 0 | 500 | 7 | 0 | 2 | 0 | 16 | 128 | 3 |
| 33 | 10 | 16 | 10 | 12 | 6 | 7 | 19 | 0 | 8 | 10 | 3 | 0 | 8 | 2 | 6 | 0 | 3 | 2 | 0 | 391 | 8 | 0 | 16 | 0 | 0 | 2 | 100 |

Emotions Decision Tree Model with GridSearch

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 815 | 37 | 8 | 5 | 30 | 9 | 6 | 4 | 3 | 6 | 9 | 0 | 1 | 14 | 1 | 25 | 0 | 34 | 65 | 1 | 1001 | 20 | 0 | 2 | 2 | 2 | 2 | 51 |
| 37 | 592 | 6 | 16 | 16 | 2 | 2 | 4 | 2 | 4 | 6 | 3 | 1 | 4 | 1 | 5 | 1 | 13 | 11 | 0 | 456 | 5 | 0 | 1 | 2 | 2 | 1 | 19 |
| 9 | 6 | 195 | 26 | 5 | 2 | 1 | 0 | 1 | 5 | 3 | 11 | 0 | 1 | 1 | 1 | 0 | 2 | 5 | 0 | 720 | 6 | 0 | 0 | 0 | 2 | 3 | 6 |
| 31 | 37 | 77 | 27 | 7 | 0 | 5 | 3 | 0 | 4 | 8 | 1 | 0 | 1 | 0 | 5 | 0 | 2 | 3 | 0 | 1445 | 4 | 0 | 1 | 1 | 8 | 5 | 6 |
| 115 | 39 | 7 | 8 | 85 | 18 | 13 | 4 | 10 | 5 | 4 | 2 | 2 | 1 | 0 | 8 | 0 | 26 | 21 | 0 | 1853 | 15 | 2 | 2 | 4 | 5 | 3 | 1 |
| 15 | 11 | 3 | 1 | 14 | 33 | 1 | 2 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 11 | 6 | 1 | 560 | 18 | 0 | 0 | 0 | 5 | 2 | 0 |
| 18 | 17 | 11 | 1 | 4 | 0 | 89 | 2 | 0 | 1 | 3 | 0 | 0 | 1 | 1 | 1 | 0 | 4 | 4 | 0 | 841 | 1 | 0 | 2 | 0 | 3 | 0 | 3 |
| 21 | 10 | 9 | 5 | 4 | 0 | 17 | 72 | 1 | 0 | 2 | 3 | 0 | 0 | 0 | 7 | 0 | 4 | 8 | 0 | 974 | 2 | 0 | 0 | 0 | 3 | 0 | 9 |
| 14 | 7 | 2 | 3 | 6 | 2 | 2 | 1 | 86 | 3 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 15 | 0 | 272 | 19 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 13 | 13 | 5 | 15 | 5 | 3 | 0 | 6 | 9 | 6 | 2 | 0 | 2 | 1 | 2 | 0 | 4 | 3 | 0 | 815 | 2 | 0 | 1 | 0 | 8 | 12 | 2 |
| 22 | 29 | 24 | 10 | 12 | 0 | 10 | 1 | 5 | 2 | 28 | 1 | 2 | 1 | 0 | 4 | 0 | 4 | 5 | 0 | 1323 | 8 | 0 | 2 | 0 | 4 | 5 | 4 |
| 7 | 1 | 36 | 7 | 0 | 1 | 1 | 0 | 1 | 5 | 2 | 40 | 0 | 1 | 2 | 1 | 0 | 2 | 3 | 0 | 449 | 0 | 0 | 1 | 0 | 0 | 1 | 3 |
| 3 | 6 | 3 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 5 | 3 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 273 | 0 | 0 | 0 | 0 | 8 | 0 | 1 |
| 41 | 17 | 8 | 1 | 6 | 0 | 4 | 5 | 4 | 1 | 3 | 0 | 0 | 47 | 0 | 4 | 0 | 24 | 12 | 0 | 375 | 7 | 0 | 2 | 0 | 1 | 0 | 38 |
| 6 | 8 | 2 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 1 | 1 | 0 | 330 | 1 | 0 | 0 | 0 | 1 | 0 | 3 |
| 76 | 10 | 2 | 11 | 7 | 14 | 0 | 2 | 8 | 5 | 3 | 0 | 0 | 9 | 0 | 1060 | 0 | 39 | 7 | 0 | 162 | 18 | 0 | 4 | 2 | 20 | 2 | 5 |
| 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 58 | 1 | 0 | 0 | 0 | 6 | 2 | 0 |
| 67 | 92 | 3 | 4 | 19 | 6 | 4 | 0 | 1 | 4 | 3 | 1 | 0 | 24 | 0 | 9 | 0 | 178 | 44 | 0 | 375 | 10 | 0 | 0 | 2 | 0 | 1 | 9 |
| 42 | 9 | 4 | 8 | 14 | 6 | 3 | 1 | 4 | 3 | 4 | 0 | 1 | 4 | 0 | 5 | 0 | 13 | 536 | 0 | 276 | 3 | 0 | 0 | 0 | 2 | 2 | 2 |
| 0 | 1 | 0 | 0 | 1 | 2 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 147 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 232 | 186 | 108 | 39 | 57 | 14 | 58 | 26 | 32 | 21 | 24 | 7 | 2 | 25 | 1 | 46 | 0 | 54 | 108 | 1 | 9886 | 56 | 0 | 4 | 3 | 21 | 12 | 27 |
| 47 | 13 | 3 | 7 | 11 | 11 | 4 | 3 | 22 | 2 | 1 | 0 | 0 | 3 | 3 | 11 | 0 | 10 | 7 | 0 | 471 | 245 | 0 | 0 | 0 | 0 | 2 | 3 |
| 13 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 0 | 115 | 2 | 0 | 0 | 1 | 0 | 0 | 1 |
| 19 | 17 | 9 | 6 | 6 | 1 | 2 | 3 | 2 | 0 | 7 | 0 | 1 | 0 | 1 | 1 | 0 | 2 | 9 | 0 | 882 | 4 | 0 | 5 | 0 | 4 | 2 | 25 |
| 14 | 2 | 1 | 1 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 9 | 2 | 0 | 99 | 2 | 0 | 0 | 2 | 0 | 0 | 1 |
| 1 | 1 | 3 | 2 | 0 | 2 | 1 | 0 | 4 | 2 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 1 | 2 | 0 | 113 | 0 | 0 | 0 | 0 | 117 | 5 | 0 |
| 14 | 8 | 7 | 7 | 10 | 5 | 2 | 1 | 6 | 10 | 4 | 0 | 2 | 0 | 0 | 3 | 0 | 1 | 4 | 2 | 612 | 3 | 0 | 6 | 0 | 52 | 62 | 1 |
| 9 | 8 | 14 | 5 | 1 | 1 | 6 | 1 | 2 | 0 | 3 | 1 | 2 | 5 | 0 | 4 | 0 | 5 | 1 | 0 | 484 | 3 | 0 | 3 | 0 | 1 | 2 | 111 |

MLP Emotions Model with GridSearch

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 989 | 66 | 3 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 61 | 0 | 3 | 117 | 0 | 875 | 0 | 0 | 0 | 0 | 1 | 2 | 24 |
| 94 | 660 | 6 | 4 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 | 0 | 4 | 17 | 0 | 383 | 0 | 0 | 0 | 0 | 0 | 1 | 27 |
| 8 | 9 | 190 | 58 | 0 | 1 | 0 | 1 | 0 | 0 | 24 | 7 | 0 | 0 | 6 | 5 | 0 | 1 | 11 | 0 | 657 | 2 | 0 | 0 | 0 | 2 | 17 | 12 |
| 34 | 38 | 143 | 59 | 2 | 0 | 1 | 1 | 0 | 0 | 36 | 6 | 0 | 0 | 13 | 10 | 0 | 1 | 14 | 0 | 1243 | 2 | 0 | 0 | 0 | 8 | 32 | 38 |
| 151 | 40 | 23 | 19 | 10 | 2 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 5 | 36 | 0 | 3 | 51 | 0 | 1846 | 1 | 0 | 0 | 0 | 5 | 29 | 19 |
| 20 | 9 | 3 | 9 | 5 | 7 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 1 | 27 | 0 | 0 | 24 | 0 | 531 | 0 | 0 | 0 | 0 | 13 | 37 | 5 |
| 11 | 23 | 31 | 9 | 0 | 0 | 21 | 4 | 0 | 0 | 3 | 1 | 0 | 0 | 2 | 6 | 0 | 0 | 6 | 0 | 871 | 0 | 0 | 0 | 0 | 3 | 4 | 12 |
| 20 | 27 | 8 | 15 | 1 | 0 | 12 | 3 | 0 | 0 | 6 | 1 | 0 | 0 | 1 | 9 | 0 | 1 | 12 | 0 | 1007 | 1 | 0 | 0 | 0 | 2 | 6 | 19 |
| 12 | 8 | 4 | 4 | 1 | 3 | 0 | 1 | 0 | 0 | 2 | 3 | 0 | 0 | 5 | 11 | 0 | 0 | 57 | 0 | 315 | 0 | 0 | 0 | 0 | 1 | 10 | 3 |
| 6 | 14 | 42 | 40 | 2 | 0 | 0 | 0 | 0 | 0 | 6 | 5 | 0 | 0 | 13 | 7 | 0 | 0 | 14 | 0 | 712 | 2 | 0 | 0 | 0 | 8 | 55 | 15 |
| 12 | 21 | 48 | 31 | 1 | 0 | 1 | 0 | 0 | 0 | 35 | 9 | 0 | 0 | 10 | 10 | 0 | 0 | 14 | 0 | 1275 | 3 | 0 | 0 | 0 | 1 | 20 | 15 |
| 5 | 2 | 89 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 35 | 0 | 0 | 11 | 1 | 0 | 0 | 5 | 0 | 332 | 0 | 0 | 0 | 0 | 6 | 12 | 7 |
| 2 | 4 | 33 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 9 | 0 | 0 | 11 | 1 | 0 | 1 | 3 | 0 | 180 | 1 | 0 | 0 | 0 | 3 | 8 | 21 |
| 127 | 29 | 5 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 15 | 0 | 4 | 37 | 0 | 356 | 1 | 0 | 0 | 0 | 1 | 3 | 15 |
| 6 | 10 | 11 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 8 | 0 | 0 | 84 | 2 | 0 | 0 | 15 | 0 | 178 | 1 | 0 | 0 | 0 | 6 | 12 | 8 |
| 149 | 2 | 2 | 0 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1133 | 0 | 1 | 18 | 0 | 121 | 0 | 0 | 0 | 0 | 12 | 17 | 2 |
| 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 51 | 1 | 0 | 0 | 0 | 4 | 5 | 0 |
| 291 | 87 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 24 | 0 | 3 | 84 | 0 | 347 | 1 | 0 | 0 | 0 | 0 | 1 | 10 |
| 105 | 14 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 9 | 0 | 3 | 592 | 0 | 196 | 0 | 0 | 0 | 0 | 2 | 4 | 4 |
| 0 | 0 | 3 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 0 | 0 | 5 | 0 | 122 | 2 | 0 | 0 | 0 | 1 | 7 | 0 |
| 367 | 229 | 188 | 133 | 24 | 14 | 8 | 2 | 0 | 0 | 71 | 17 | 0 | 0 | 54 | 94 | 0 | 3 | 204 | 0 | 9411 | 8 | 0 | 0 | 0 | 13 | 124 | 86 |
| 80 | 16 | 6 | 13 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 13 | 29 | 0 | 3 | 107 | 0 | 565 | 11 | 0 | 0 | 0 | 6 | 16 | 8 |
| 27 | 3 | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 6 | 0 | 99 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 21 | 29 | 21 | 11 | 2 | 0 | 0 | 1 | 0 | 0 | 7 | 2 | 0 | 0 | 8 | 8 | 0 | 1 | 19 | 0 | 840 | 1 | 0 | 0 | 0 | 5 | 13 | 19 |
| 19 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 9 | 0 | 96 | 0 | 0 | 0 | 0 | 0 | 6 | 0 |
| 3 | 0 | 2 | 2 | 0 | 4 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 7 | 9 | 0 | 0 | 7 | 0 | 69 | 0 | 0 | 0 | 0 | 72 | 80 | 2 |
| 10 | 11 | 11 | 13 | 2 | 1 | 0 | 1 | 0 | 0 | 14 | 4 | 0 | 0 | 14 | 6 | 0 | 0 | 17 | 0 | 505 | 0 | 0 | 0 | 0 | 36 | 169 | 8 |
| 27 | 47 | 16 | 11 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 3 | 4 | 0 | 6 | 14 | 0 | 422 | 0 | 0 | 0 | 0 | 1 | 4 | 112 |

BASE-MNB Sentiments Model

|  |  |  |  |
| --- | --- | --- | --- |
| 913 | 583 | 1484 | 873 |
| 318 | 4001 | 2137 | 1226 |
| 644 | 1944 | 5493 | 2973 |
| 297 | 912 | 2296 | 8270 |

BASE-Sentiment Decision Tree Model

|  |  |  |  |
| --- | --- | --- | --- |
| 1882 | 620 | 883 | 468 |
| 819 | 4550 | 1539 | 774 |
| 1589 | 2455 | 5214 | 1796 |
| 868 | 1333 | 2568 | 7006 |

BASE-MLP Sentiments Model

|  |  |  |  |
| --- | --- | --- | --- |
| 962 | 569 | 1691 | 631 |
| 304 | 4067 | 2377 | 934 |
| 608 | 1855 | 6375 | 2216 |
| 267 | 908 | 2555 | 8045 |

MNB Sentiments Model with GridSearch

|  |  |  |  |
| --- | --- | --- | --- |
| 1136 | 605 | 1293 | 819 |
| 424 | 4107 | 1988 | 1163 |
| 889 | 2005 | 5281 | 2879 |
| 402 | 972 | 2213 | 8188 |

Sentiments Decision Tree Model with GridSearch

|  |  |  |  |
| --- | --- | --- | --- |
| 502 | 299 | 2860 | 192 |
| 215 | 1833 | 5241 | 393 |
| 298 | 848 | 9089 | 819 |
| 261 | 574 | 5792 | 5148 |

MLP Sentiments Model with GridSearch

|  |  |  |  |
| --- | --- | --- | --- |
| 740 | 509 | 2018 | 586 |
| 226 | 3940 | 2612 | 904 |
| 443 | 1737 | 6691 | 2183 |
| 182 | 913 | 2824 | 7856 |