

This is a table where the bolded list are our given emotions, and the next five terms are what the false negatives were mistakenly identified as.

I.e., for the first column, we have aggression. If a document was labeled aggression, but was identified by the algorithm as something else, it would be a false negative. The rest of the columns are what the false negatives were labeled as, listed in terms of frequency, truncated to five. For aggression, the top 5 false negatives labels (making them false positives for that category) were neutral, anticipation, disapproval, optimism, and contempt. The numbers to the right are frequency.

Due to algorithm weighting the predictions, to see the relationship between two emotions, it is necessary to normalize the false negatives by weight to see how "hard" one category is to predict from another.

This was done by

$$\frac{\text{Mistakenly labeled category D}}{\text{Total entries in the data set for Category D}} \cdot 100$$

Aggression	Neutral	22	Anticipation	9	Disapproval	9	Optimism	9	Contempt	6
Ambiguous	Neutral	38	Disapproval	17	Optimism	11	Joy	8	Anger	7
Anger	Neutral	27	Disapproval	10	Fear	7	Optimism	6	Contempt	5
Anticipation	Neutral	14	Optimism	8	Joy	7	Disapproval	5	Anger	4
Awe	Neutral	25	Ambiguous	6	Anticipation	6	Optimism	6	Anger	3
Contempt	Neutral	27	Disapproval	13	Anticipation	7	Fear	7	Anger	6
Disapproval	Neutral	22	Optimism	11	Anger	7	Anticipation	6	Joy	5
Disgust	Neutral	23	Optimism	16	Disapproval	9	Joy	9	Anger	6
Fear	Neutral	17	Disapproval	13	Anger	6	Anticipation	4	Ambiguous	3
Joy	Neutral	20	Disapproval	8	Anger	5	Optimism	5	Anticipation	4
Love	Disapproval	11	Neutral	11	Optimism	10	Fear	5	Ambiguous	4
Neutral	Disapproval	7	Optimism	7	Anger	6	Anticipation	5	Fear	5
Optimism	Neutral	21	Disapproval	9	Anticipation	6	Joy	6	Contempt	4
Remorse	Neutral	31	Ambiguous	11	Anticipation	9	Anger	6	Disapproval	6
Sadness	Neutral	23	Optimism	11	Disapproval	10	Anger	6	Love	5
Submission	Neutral	16	Anger	6	Fear	6	Joy	6	Anticipation	5
Surprise	Neutral	21	Disapproval	11	Optimism	7	Anticipation	6	Anger	5
Trust	Neutral	33	Optimism	6	Sadness	6	Aggression	3	Anticipation	3