

**Patterns, Volume 4**

**Supplemental information**

**Bodily expressed emotion understanding through  
integrating Laban movement analysis**

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**Table S1****AP values for all emotion categories on the BoLD validation set**

To provide a comprehensive view of how LMA improves BEEU across all emotion categories, we present a category-specific performance analysis of MANet in this table. Consistent with Tables 8 and 9 in the main body of the text, “Baseline-1” represents the original V-Swin model without the dual-branch and fusion elements, essentially operating without the assistance of LMA labels. “Baseline-2” refers to the MANet model excluding the Bridge loss. Our final model is denoted as “Ours”. For each emotion category, the **most effective** and **second most effective** approaches are highlighted with color indicators. The table illustrates that, out of 26 categories, our model outperforms in 16. Even in the remaining categories, our model’s performance is not substantially inferior to either Baseline-1 or Baseline-2. Consequently, it can be inferred that integrating LMA labels from the BoME dataset and utilizing our proposed network model not only amplifies the accuracy of predicting happiness and sadness, as stated in the main text, but also significantly improves the prediction of various other emotions with negligible adverse effects on the remaining categories.

| Emotion Category | Baseline-1 | Baseline-2 | Ours  |
|------------------|------------|------------|-------|
| Peace            | 27.59      | 29.73      | 30.49 |
| Affection        | 30.69      | 30.11      | 33.16 |
| Esteem           | 17.43      | 16.08      | 15.22 |
| Anticipation     | 29.51      | 29.59      | 28.86 |
| Engagement       | 44.67      | 46.57      | 44.35 |
| Confidence       | 41.22      | 43.68      | 44.04 |
| Happiness        | 44.97      | 44.41      | 45.76 |
| Pleasure         | 28.12      | 31.56      | 30.11 |
| Excitement       | 30.36      | 28.62      | 30.77 |
| Surprise         | 11.53      | 13.24      | 14.89 |
| Sympathy         | 11.49      | 13.36      | 16.42 |
| Confusion        | 23.44      | 22.93      | 22.49 |
| Disconnection    | 10.11      | 10.22      | 10.63 |
| Fatigue          | 16.89      | 14.61      | 17.21 |
| Embarrassment    | 3.22       | 3.55       | 3.80  |
| Yearning         | 7.70       | 3.49       | 3.82  |
| Disapproval      | 14.41      | 17.33      | 17.92 |
| Aversion         | 10.00      | 10.73      | 9.54  |
| Annoyance        | 18.81      | 20.48      | 19.44 |
| Anger            | 14.90      | 15.15      | 14.00 |
| Sensitivity      | 10.75      | 11.40      | 14.08 |
| Sadness          | 17.91      | 17.60      | 26.66 |
| Disquietment     | 21.94      | 22.53      | 21.06 |
| Fear             | 17.09      | 17.46      | 18.49 |
| Pain             | 4.44       | 4.61       | 5.97  |
| Suffering        | 10.00      | 12.08      | 13.26 |
| Mean             | 19.97      | 20.43      | 21.25 |