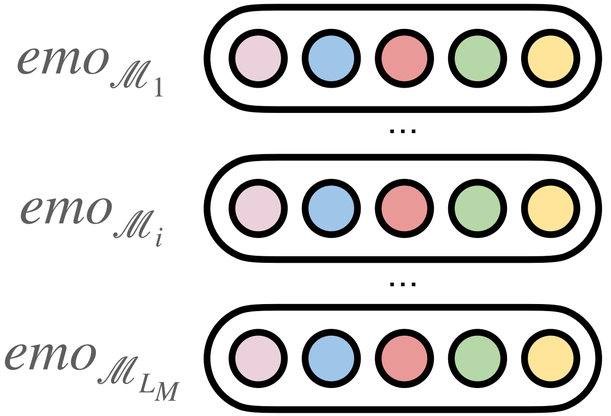
Methodology

Social Emotion



- Extract Social Emotion from the comments of a news piece and then aggregate them as the whole representation.
- Given a set of comments of a news piece: $\mathscr{M} = [\mathscr{M}_1, \mathscr{M}_2, \ldots, \mathscr{M}_{L_{\mathscr{M}}}]$
- As for $\mathscr{M}_i$, can get $emo_{\mathscr{M}_i}$, then stack the transposed emotion vector of every comment to obtain the whole emotion vector of comments $\widehat{emo_{\mathscr{M}}}$.
- $\widehat{emo_{\mathscr{M}}} = emo_{\mathscr{M}_1}^{\top} \oplus emo_{\mathscr{M}_2}^{\top} \oplus \cdots \oplus emo_{\mathscr{M}_{L_{\mathscr{M}}}}^{\top}$

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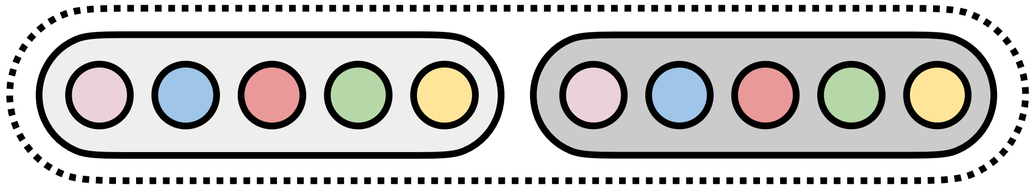
Social Emotion



$$emo_{\mathscr{M}} = emo_{\mathscr{M}}^{mean} \oplus emo_{\mathscr{M}}^{max}$$

- After getting $\widehat{emo_{\mathscr{M}}}$, consider two aggregators to generate the social emotion of the whole comment list:
  - Mean pooling for representing the average emotional signals
    - $emo_{\mathscr{M}}^{mean} = mean(\widehat{emo_{\mathscr{M}}})$
  - Max pooling for capturing the extreme emotional signals
    - $emo_{\mathscr{M}}^{max} = max(\widehat{emo_{\mathscr{M}}})$
- Then concatenate them as Social Emotion: $emo_{\mathscr{M}} = emo_{\mathscr{M}}^{mean} \oplus emo_{\mathscr{M}}^{max}$