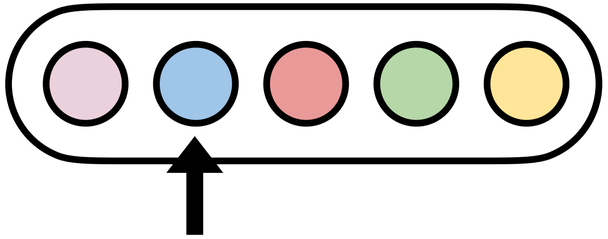
Methodology

Emotion Lexicon



- Usually, a piece of text conveys specific emotions by using several specific words (which are generally included in emotional lexicons).
- The approach is dependent on the existing emotion dictionaries annotated by experts.
- Assume that there're d_e kinds of emotions: $E = \{e_1, e_2, \ldots, e_{d_e}\}$
- The dictionary provides a list of emotional words $\mathscr{E}_e = \{w_{e,1}, w_{e,2}, \ldots, w_{e,L_e}\}$

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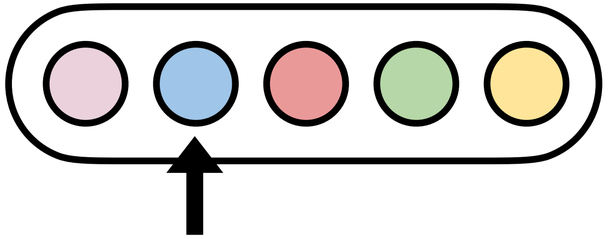

- Given $\mathcal{T}$, gradually aggregate the scores of each word and the whole text across all the emotions for rich representation.
- For one of the emotion e, firstly calculate the word-level scores $s(t_i, e)$, if t_i is in $\mathcal{E}_e$, consider not only its occurrence frequency but also its contextual words.
- $$s\left(t_i, e\right) = \frac{1_{\mathcal{E}_e}\left(t_i\right) \times \mathrm{neg}\left(t_i, w\right) \times \mathrm{deg}\left(t_i, w\right)}{L}$$
- Example: "I am not very joyful today." $s(\text{joyful}, e_{happy}) = -1 \times 2 \times (1/6) = -1/3$