## 2023\_WSDM\_A Multimodal Framework for the Identification of Vaccine Critical Memes on Twitter

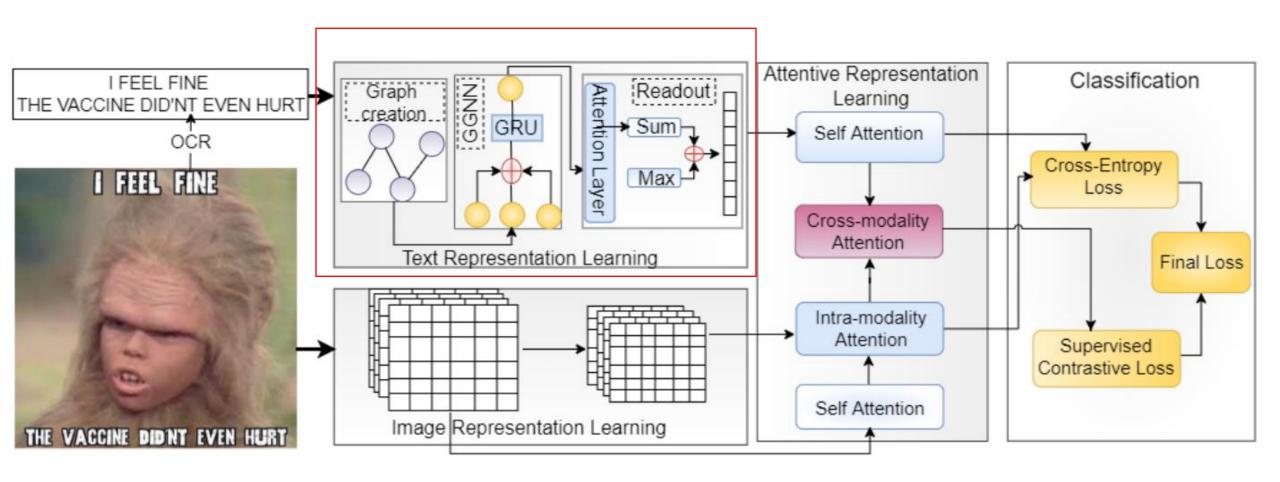
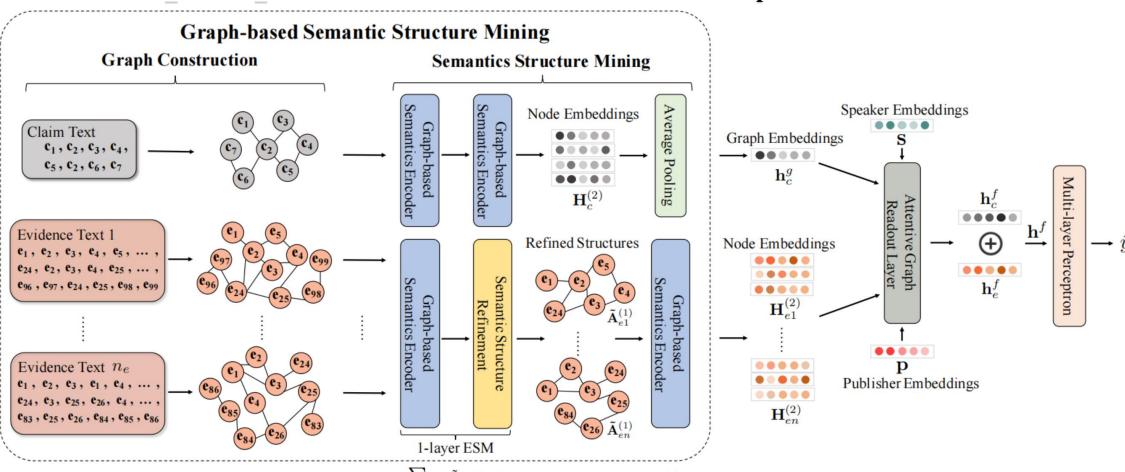


Figure 2: Overall architecture of the proposed multimodal framework.

## 2022\_ WWW\_ Evidence-aware Fake News Detection with Graph Neural Networks



$$\mathbf{a}_{i} = \sum_{(\mathbf{w}_{i}, \mathbf{w}_{j}) \in C} \tilde{\mathbf{A}}_{ij} \mathbf{W}_{a} \mathbf{H}_{j} \tag{1}$$

$$\mathbf{z}_i = \sigma \left( \mathbf{W}_z \mathbf{a}_i + \mathbf{U}_z \mathbf{H}_i + \mathbf{b}_z \right) \tag{2}$$

$$\mathbf{r}_{i} = \sigma \left( \mathbf{W}_{r} \mathbf{a}_{i} + \mathbf{U}_{r} \mathbf{H}_{i} + \mathbf{b}_{r} \right) \tag{3}$$

$$\tilde{\mathbf{H}}_i = \tanh \left( \mathbf{W}_h \mathbf{a}_i + \mathbf{U}_h \left( \mathbf{r}_i \odot \mathbf{H}_i \right) + \mathbf{b}_h \right) \tag{4}$$

(5)

$$\hat{\mathbf{H}}_i = \tilde{\mathbf{H}}_i \odot \mathbf{z}_i + \mathbf{H}_i \odot (1 - \mathbf{z}_i)$$

$$\mathbf{s}_r = \mathbf{GGNN}(\tilde{\mathbf{A}}, \hat{\mathbf{H}}_{\mathbf{e}} \mathbf{W}_s) \tag{6}$$

$$idx = topk\_index(s_r) \tag{7}$$

$$\tilde{\mathbf{A}}_{idx,:} = \tilde{\mathbf{A}}_{:,idx} = 0 \tag{8}$$

## 2022\_KBS\_Improving multimodal fusion with Main Modal Transformer for emotion recognition in conversation

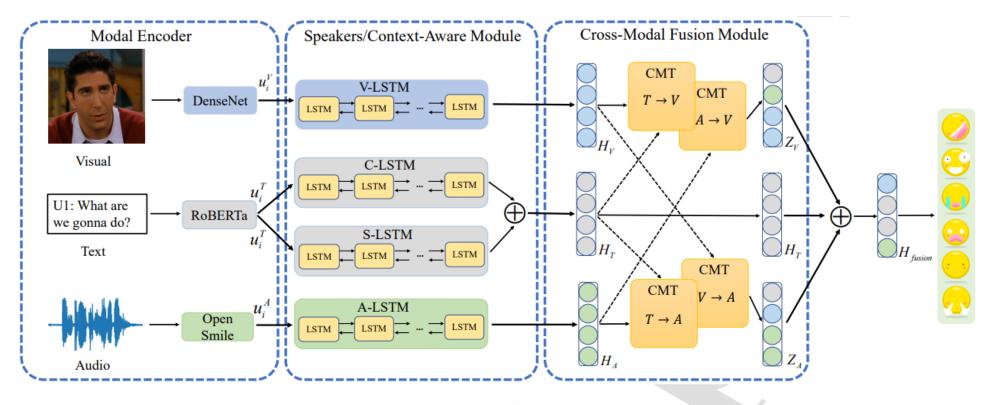


Figure 2: Overall architecture of the proposed MMTr.