Coupled Word Embedding

Multi-sentiment-resource Attention Module

Sentiment words

w_1^s
w_m^s

Sentiment-Context Correlation module

G R U

h_1^s
h_m^s

Sentiment word Attention

O_1

Intensity words

w_1^i
w_k^i

Intensity-Context Correlation module

G R U

h_1^i
h_k^i

Intensity word Attention

O_2

Context words

w_1^c
w_t^c

G R U

h_1^c
h_t^c

Concatenation

Softmax Classifier

Negation words

w_1^n
w_p^n

Negation-Context Correlation module

G R U

h_1^n
h_p^n

Negation word Attention

O_3

Sentiment-Context Correlation module

Context Words

w_1^c
w_2^c
w_t^c

W^c

correlation matrix

X^s

Sentiment Words

w_1^s
w_2^s
w_m^s

W^s

X_s^c

Char-CNN

Word-level Embedding

Character-level Embedding

GLOVE

Char-CNN

i l l e g a l

One-hot

1x1 Conv Layer

Multi-gram Conv

Character-level Embedding

The Overall Framework of the MEAN Model