

Experiments

Evaluation Questions

- EQ1: Are Dual Emotion Features more **effective than baseline features when used alone** for fake news detection? How effective are the **different types of features** in Dual Emotion Features?
- EQ2: Can Dual Emotion Features help improve the performance of text-based fake news detectors?
- EQ3: How robust do the fake news detection models with Dual Emotion Features in real-world scenarios?
- EQ4: How effective are the components of Dual Emotion Features, including the publisher emotion, social emotion, and emotion gap?

Experiments

Effectiveness of Dual Emotion Features

Source	Emotion Features	R-19	W-16	W-20
Content	Emoratio	0.185	0.553	0.524
	EmoCred	0.253	0.564	0.542
	Publisher Emotion	0.290	0.571	0.573
Comments	Social Emotion	0.296	0.692	0.754
Content, Comments	Emotion Gap	0.332	0.716	0.746
	Dual Emotion Features	0.337	0.728	0.759

- Publisher Emotion is **more effective** than EmoCred and Emoratio, especially on the RumorEval.
 - It's reveals the **effectiveness** of Dual Emotion Features in modeling emotional signals.
- Moreover, observe that **more improvements** of Social Emotion and Emotion Gap,
- Using Dual Emotion Features can further obtain enhancements on the three datasets.
- *Clarified that RumourEval-19 are rather worse than the two Chinese datasets.
 - Because of the **amount of news pieces is small** and there is a relatively low inter-annotator agreement for the dataset.