

Experiments

Case Study

Content	Publisher emotion: <i>Angry</i>			Content	Publisher emotion: <i>Joyful</i>			Content	Publisher emotion: <i>None</i>		
Black Lives Matter THUGS Blocking Emergency Crews From Reaching Hurricane Victims.				Believe it or not, this is a shark on the freeway in #Houston, #Texas #HurricaneHarvy...				Category 6? If Hurricane Irma Becomes The Strongest Hurricane In History, It Could Wipe Entire Cities Off The Map.			
Comments	Social emotion: <i>Angry</i>			Comments	Social emotion: <i>Joyful</i>			Comments	Social emotion: <i>Sad</i>		
Run over their asses.				Fresh water? Nice try.				Watch what the power of prayer does			
...						
When thugs block emergency vehicles, vehicles should run over the thugs				Oh my!				Get out of there people. Florida, South Carolina.			
...						
And why don't we have military support there to enforce the law?				It's trying to ask you for directions...must be a female shark!! 😊				Pray to god the only chance you have...			
	Fake	Real	Unverified		Fake	Real	Unverified		Fake	Real	Unverified
BiGRU	0.33	0.61	0.06	BiGRU	0.31	0.50	0.19	BiGRU	0.47	0.52	0.01
BiGRU + Emoratio	0.35	0.57	0.08	BiGRU + Emoratio	0.36	0.56	0.08	BiGRU + Emoratio	0.40	0.59	0.01
BiGRU + EmoCred	0.27	0.64	0.09	BiGRU + EmoCred	0.40	0.54	0.06	BiGRU + EmoCred	0.28	0.58	0.14
BiGRU + Dual Emotion Features	0.65	0.21	0.14	BiGRU + Dual Emotion Features	0.65	0.22	0.13	BiGRU + Dual Emotion Features	0.63	0.17	0.20

- It exhibits using Emoratio & EmoCred **do not help** BiGRU detect rightly for the three cases.
- It reveals that mining dual emotion additionally sometimes **is a remedy for incompetence** of only using semantics for detecting fake news.

Conclusion and Future Work

- Bring a **new concept** of dual emotion (i.e., **publisher** emotion, **social** emotion).
- Uncover the **relationship between** dual emotion signals (emotion **gap**).
- Proposed Dual Emotion Features expose the **distinctive** emotional signals for detecting fake news.
- The proposed features can be **easily plugged into existing fake news detectors** as enhancement.
- In future work, authors plan to **leverage the multi-modal information** to capture the emotions more precisely for dual emotion representation.