

Experiments

Performance Comparison: RumourEval-19

Models	Macro F1 score	RMSE	F1 score		
			Fake News	Real News	Unverified News
BiGRU	0.269	0.804	0.500	0.222	0.083
+ Emoratio	0.275	0.823	0.463	0.160	0.200
+ EmoCred	0.311	0.797	0.456	0.295	0.182
+ Dual Emotion Features	0.340	0.752	0.580	0.337	0.104
BERT	0.272	0.808	0.533	0.105	0.176
+ Emoratio	0.271	0.857	0.406	0.240	0.167
+ EmoCred	0.308	0.833	0.367	0.367	0.189
+ Dual Emotion Features	0.346	0.778	0.557	0.244	0.238
NileTMRG	0.309	0.770	0.557	0.245	0.125
+ Emoratio	0.331	0.754	0.571	0.280	0.143
+ EmoCred	0.307	0.786	0.296	0.500	0.125
+ Dual Emotion Features	0.342	0.754	0.565	0.565	0.100

- After using Dual Emotion Features, the three fake news detectors are **improve a lot**.

Experiments

Performance Comparison: Weibo

Models	Weibo-16				Weibo-20			
	Macro F1 score	Accuracy	F1 score		Macro F1 score	Accuracy	F1 score	
			Fake	Real			Fake	Real
BiGRU	0.807	0.822	0.754	0.860	0.839	0.839	0.839	0.839
+ Emoratio	0.794	0.810	0.738	0.851	0.850	0.850	0.854	0.846
+ EmoCred	0.766	0.778	0.711	0.820	0.829	0.829	0.836	0.821
+ Dual Emotion Features	0.826	0.838	0.781	0.871	0.855	0.855	0.857	0.852
BERT	0.824	0.845	0.762	0.886	0.900	0.900	0.900	0.900
+ Emoratio	0.837	0.857	0.780	0.894	0.901	0.901	0.900	0.902
+ EmoCred	0.849	0.867	0.797	0.901	0.902	0.902	0.901	0.903
+ Dual Emotion Features	0.867	0.873	0.837	0.896	0.915	0.915	0.913	0.918
HSA-BLSTM	0.849	0.855	0.819	0.879	0.913	0.913	0.912	0.914
+ Emoratio	0.863	0.872	0.829	0.898	0.920	0.920	0.920	0.920
+ EmoCred	0.854	0.861	0.822	0.886	0.903	0.903	0.902	0.905
+ Dual Emotion Features	0.908	0.913	0.885	0.930	0.932	0.932	0.932	0.933

- Observed that Dual Emotion Features **outperforms** Emoratio & EmoCred on any models.
- However, when using Emoratio & EmoCred on BiGRU, sometimes the metrics even decrease, it reveals that Emoratio & EmoCred are more likely to be **overfitted**.