Experiments

Baselines

- **LIWC** (traditional): Logistic Regression (**LIWC-LR**), SVM (**LIWC-SVM**) and Random Forest (**LIWC-RF**)
- **LSTM, CNN (LSTM$_{semi}$, CNN$_{semi}$)**
  - To show effects of automatic annotation, also proposed two semi-supervised models
- **EANN** (KDD'18)
- To show the role of data selector, design one variant of the proposed model named **WeFEND–** , which does not include data selector

Experiments

Performance Comparison

Category	Method	Accuracy	AUC-ROC	Fake News			Real News		
				Precision	Recall	F_1	Precision	Recall	F_1
Supervised	LIWC-LR	0.528	0.558	0.604	0.160	0.253	0.517	0.896	0.655
	LIWC-SVM	0.568	0.598	0.574	0.521	0.546	0.563	0.614	0.587
	LIWC-RF	0.590	0.616	0.613	0.483	0.541	0.574	0.696	0.629
	LSTM	0.733	0.799	0.876	0.543	0.670	0.669	**0.923**	0.775
	CNN	0.747	0.834	0.869	0.580	0.696	0.685	0.913	0.783
	EANN	0.767	0.803	0.863	0.634	0.731	0.711	0.899	0.794
Semi-supervised	$LSTM_{semi}$	0.753	0.841	0.854	0.611	0.713	0.697	0.895	0.784
	CNN_{semi}	0.759	0.848	0.850	0.630	0.723	0.706	0.889	0.787
Automatically annotated	WeFEND−	0.807	0.858	0.846	**0.751**	0.795	0.776	0.863	0.817
	WeFEND	**0.824**	**0.873**	**0.880**	**0.751**	**0.810**	**0.783**	0.898	**0.836**

- Observe that WeFEND achieves the best results in terms of Accuracy, AUC-ROC, precision, recall and F1 measurement