Experiments

RQ2: Ablation Study: Encoder Variants

Feature	POL				GOS			
	GraphSAGE		GCNFN		GraphSAGE		GCNFN	
	ACC	F1	ACC	F1	ACC	F1	ACC	F1
Profile	77.38	77.12	76.94	76.72	92.19	92.16	89.00	88.96
word2vec	80.54	80.41	80.54	80.41	96.81	96.80	94.97	94.95
BERT	**84.62**	**84.53**	83.26	83.14	**97.23**	**97.22**	96.18	96.17

- Table show performance of 2 GNN variants using 3 different node features.
- GraphSAGE: a GNN to learn node embeddings via aggregating neighbor nodes information
- GCNFN: a GNN-based fake news detection model which leverages two GCN layers to encode the news propagation graph
- Endogenous features (word2vec & BERT) are consistently better than the profile feature (only encodes the user profile information)
- Also observe that GraphSAGE+BERT have the average best performance among others

Note that the BERT performance could be further improved via fine-tuning, and authors leave it as future work.

Experiments

RQ2: Ablation Study:

Framework Variants

- Design 3 UPFD variants that remove the endogenous info, exogenous info or both of them.
- Employ the GCNFN (word2vec) as the graph (text) encoder for both datasets, and remove news concatenation to ensure a fair comparison
- $-EXO$ is implemented by removing all edges in the news propagation graph, thus encodes the news embedding solely based on node features without exchanging information between nodes
- $-END$ takes the user profile as node features and doesn't contain user endogenous preference information.
- $-EXO$ & $-END$ replaces the node features of the $-EXO$ with user profile features