Introduction

Contributions

- Novel graph representation that models all major social actors and their interactions.
- Factual News Graph (FANG), an inductive graph learning framework
  - Capture the social structure and engagement patterns to improve representation quality
  - Robust given limited training labels
  - Generalizable to related credibility assessment tasks (i.e., predicting the factuality of a news medium)

Related Work

Comparison between representation learning frameworks

Approach	Social Entities & Interactions	Temporal	Graphical	Deep	Inductive	Representative
Feature engineering [6, 26, 32, 44]	1, 2				✓	
Popat [33]	2, 3, 6	✓				
CSI [35]	1, 2, 4, 5	✓		✓	✓	
TriFN [39]	1, 2, 3, 4, 5, 6		✓			✓
MVDAM [21]	2, 3, 6, 7		✓	✓		
Monti [29]	1, 2, 4, 5	✓	✓			
GLAN [45]	1, 2, 5		✓	✓		
FANG (Our proposed approach)	1, 2, 3, 4, 5, 6, 7	✓	✓	✓	✓	✓

Comparison between representation learning frameworks for social entities (1. users, 2. news, 3. sources) and interactions (4. user-user friendship, 5. user–news engagement, 6. source–news publication, 7. source–source citation) on whether they consider engagement time, graph modeling of social context, deep learning, inductiveness, and representation learning.