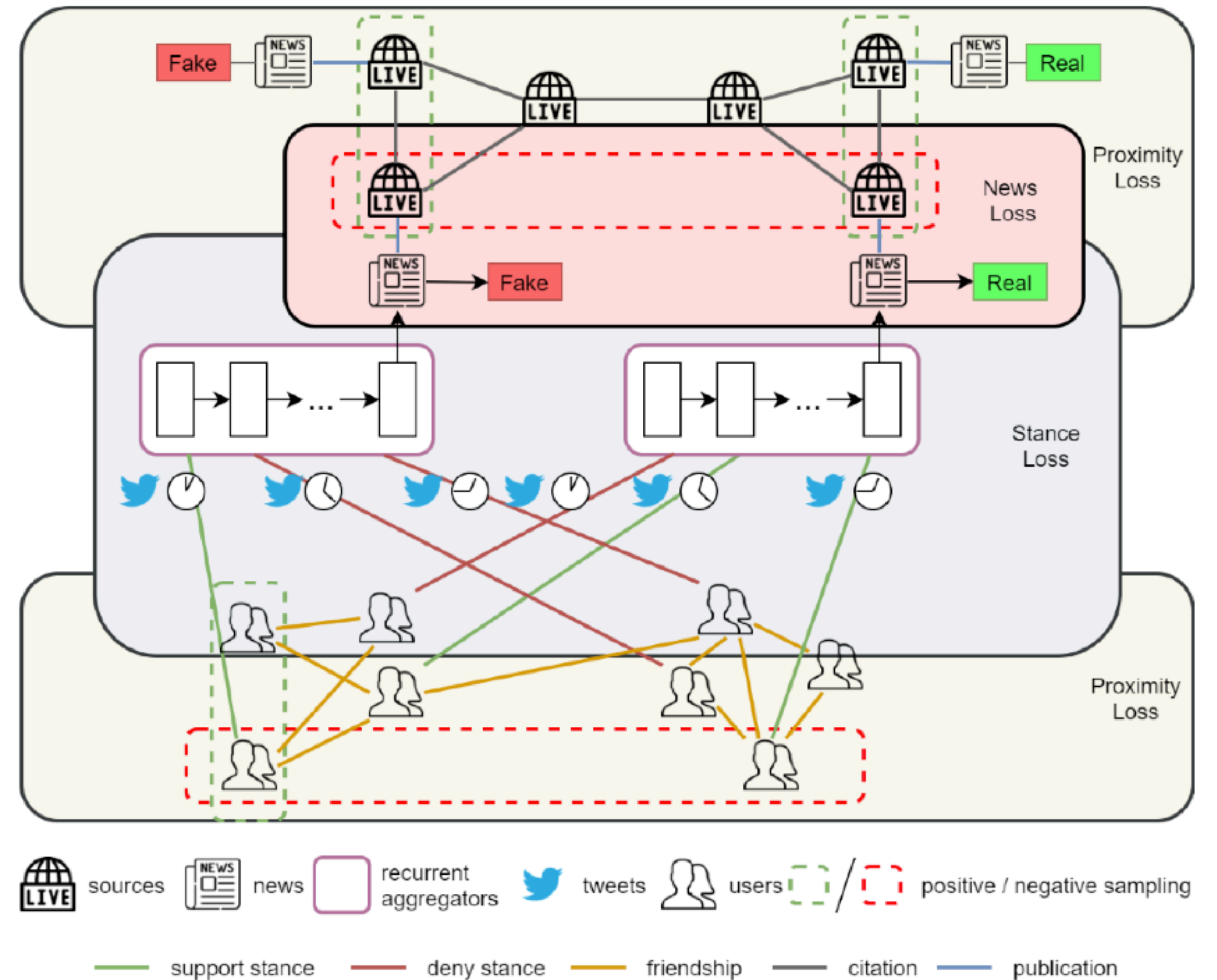


Methodology

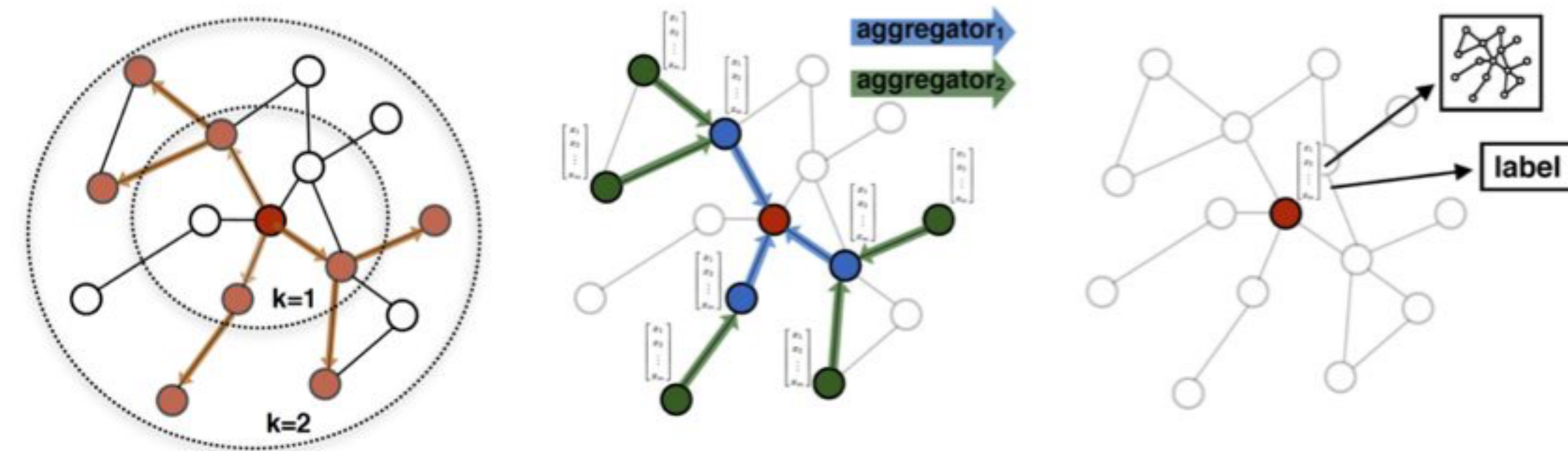
Factual News Graph (FANG) Framework

- While optimizing for the fake news detection objective, FANG also learns generalizable representations for the social entities.
- This is achieved by optimizing three concurrent losses:
 - Unsupervised Proximity Loss
 - Self-supervised Stance Loss
 - Supervised Fake News Detection Loss



Methodology

FANG - Representation Learning



GraphSage

- Like Deep Walk and node2vec compute a node embedding by sampling its neighborhood, and then optimizing for the proximity loss similarly to word2vec.
- Now the neighborhood is defined by the graph structure.
- Recently, GraphSage was proposed to overcome this limitation by allowing auxiliary node features to be used jointly with proximity sampling as part of the representation learning.