

Methodology

Graph Construction from Social Context – Stance Detection

- Use **user reply** with respect to the title of a questionable news article.
- Classify a post as verbatim reporting of the news article if it **match the title** after clean process.
- Remaining post train a **stance detector** to classify the remaining post → support, deny
- In order to further classify support posts into neutral and with negative sentiment, we fine-tuned a similar architecture on the Yelp Review Polarity dataset to obtain a **sentiment classifier**.

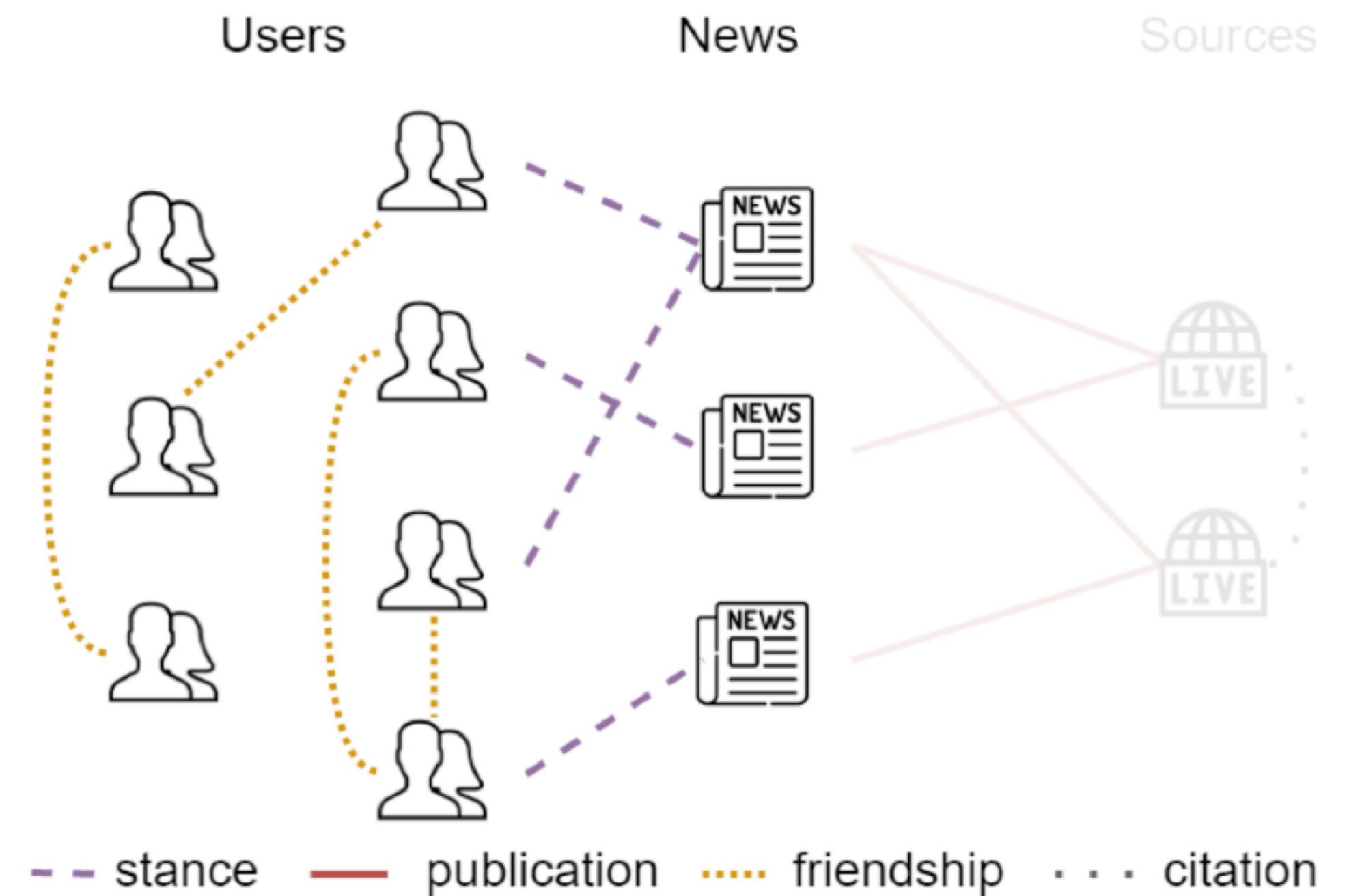


Figure 1: Graph representation of social context.

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

