Preliminaries

Notation

- Each c_i is associated with a ground-truth label $y_i \in \{F, T\}$ (False Rumor, True Rumor)
  - In some cases, $y_i \in \{N, F, T, U\}$ (Non-rumor, False Rumor, True Rumor, Unverified Rumor)
- Given the dataset, the goal of rumor detection is to learn a classifier $f : C \rightarrow Y$

Preliminaries

Graph Convolutional Networks

- GCN is one of the most effective convolution models
  - Considered as a general "message-passing" architecture
  - $\mathbf{H}_k = M\left(\mathbf{A}, \mathbf{H}_{k-1}; \boldsymbol{W}_{k-1}\right)$: hidden feature matrix computed by k-th GCL
    - $\mathbf{A}$: adjacency matrix
    - $\mathbf{H}_{k-1}$: hidden feature matrix
    - $\boldsymbol{W}_{k-1}$: trainable parameters
    - M: message propagation function for GCN