Abstract

Fully automated rumor defeating is meaningful for reducing hazards of misinformation in social networks. As one of the automated approaches, content-based rumor defeating is a pipeline that could be divided into four sequential subtasks: detection, tracking, sentence classification, and veracity. Specifically, rumor tracking gathers relevant posts and filters unrelated posts for a potential rumor news, which is significant for rumor defeating and has not been studied extensively. However, the existing proposals only consider rumor tracking as an auxiliary task in multi-task learning without special optimization, therefore restraining the accuracy of tracking performance. To this end, we propose a deep reinforcement learning based ensemble model for rumor tracking (RL-ERT), which aggregates multiple components by a weight-tuning policy network, and utilizes specific social features to improve the performance. Finally, we conduct experiments on public datasets and the experimental results show the superiority of RL-ERT on efficiency and effectiveness.