

Week 8-2: Paper Summaries

CE-510 Seminar: Social Media Mining

Student Name: Jiaqi Guo NetID: JGR9647

■ Towards Online Spam Filtering in Social Networks

Online social networks (OSNs) are extremely popular among Internet users. Unfortunately, in the wrong hands, they are also effective tools for executing spam campaigns. In this paper, they proposed to use spam campaigns for spam classification, and solve the challenge of reconstructing campaigns in real time by adopting incremental clustering and parallelization. Besides, they identify six features that distinguish spam campaigns from legitimate message clusters in OSNs.

Possible Improvement Directions:

1. Spammers are trying to produce some image-based spam to anti-spam detection. And the model in this paper is not work for such kind of spam, so the possible improvement direction can be find a possible method to encode those image into some sort of model-explainable data.

■ Social Spammer Detection in Microblogging

In this paper, they investigate how to collectively use network and content information to perform effective social spammer detection in microblogging. Many existing text classification methods assume that instances are independent and identically distributed (i.i.d.). They focus on either building a sophisticated feature space or employing effective classifiers to achieve better classification performance, without taking advantage of the fact that the instances are networked with each other. They present an optimization formulation by considering both network and content information in a unified model.

The experimental result has revealed that their method can effectively utilize both kinds of information for social spammer detection.

Possible Improvement Directions:

1. There are many potential future extensions of this work. It would be interesting to investigate other social activities, like retweet behavior and emotion status, for social spammer detection.
2. Sparse learning can generate several important textual features with the model. Conducting behavior and linguistic analysis across social media sites to better understand motivations of the social spammers with the textual features is also a promising direction.