

# A Study of Effective Features for Detecting Long-surviving Twitter Spam Accounts

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As social networking websites get popular in recent years, the spam accounts on them also increase rapidly. A number of features to detect spam accounts have been proposed in prior studies. In this work, we evaluate the common features to see how effective they are to detect Twitter spam accounts or not. We used the Twitter APIs to collect 26,758 public accounts with 508,403 tweets intermittently over the period from September 2011 to March 2012. Although Twitter has its own method to detect and suspend spam accounts, many long-surviving spam accounts are still on it. We selected 816 out of the long-surviving accounts to persistently observe their activities and recorded their lifespans. We find that some features are not so effective for the detection, and thus select two features, the URL rate and the interaction rate, to be the detection features in this work. With classification by the J4.8 algorithm, the precision of the detection is estimated to be between 0.829 and 0.885, and the recall is between 0.987 and 0.999. We also present several additional techniques to further improve the detection accuracy.

**Keyword**—Twitter spam, detection, effective features, URL rate, interaction rate.



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