

# Fighting the water army of fake reviewers

November 8 2016, by David Bradley

---

Fake reviews do nothing for the confidence of customers buying products and services online, they also damage company reputations and can lead to ill feeling about the online marketplace itself. Now, researchers in China have devised an algorithm to help weed out fake reviews on ecommerce sites. They publish details this month in the *International Journal of Services Operations and Informatics*.

Song Deng of the Jiangxi University of Finance and Economics, Nanchang, China, explains how our shopping habits have changed and more and more people are buying products and services online. One of the mainstays of the modern sales website are customer reviews and there are even complete sites that offer consumers a place to discuss their experiences with a given product.

Over the years, there have been several scandals regarding large numbers of [fake reviews](#) on major online marketplaces and sites offering travel advice and holiday packages. There is an urgent need to develop a robust algorithm that can detect the fakers and remove their hyperbole and give consumers a truer picture of whether a given product is an five-star or a no-star item. In other words, we need an automatic lawnmower to cut down the "astroturfing", the artificial grass-roots marketing of products.

Deng's method recognises deceptive reviews based on how the posters has behaved previously and the content of their earlier reviews. First, it builds a recognition model that can spot fake reviewers, ghostwriters and paid members of the "so-called "water army" based on the number of reviews, frequency and length. It then looks at content features, such as

review length, the degree of professionalism, the emotional density, the format and any obvious biases. Finally, the algorithm applies an unsupervised clustering algorithm based on F statistics and a feature degree.

When combined, these techniques outshine earlier detection algorithms for reviews of cars, smart phones and computers. Fundamentally, the system combines the advantages of behavior feature and content feature recognition to improve accuracy.

**More information:** Song Deng. Deceptive reviews detection of industrial product, *International Journal of Services Operations and Informatics* (2016). [DOI: 10.1504/IJSOI.2016.10001006](https://doi.org/10.1504/IJSOI.2016.10001006)

Provided by Inderscience

Citation: Fighting the water army of fake reviewers (2016, November 8) retrieved 23 April 2024 from <https://phys.org/news/2016-11-army-fake.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.