Accepted Manuscript

An ensemble learning based approach for impression fraud detection in mobile advertising

Ch. Md. Rakin Haider, Anindya Iqbal, Atif Hasan Rahman, M. Sohel Rahman

PII: S1084-8045(18)30072-9

DOI: 10.1016/j.jnca.2018.02.021

Reference: YJNCA 2080

To appear in: *Journal of Network and Computer Applications*

Received Date: 5 November 2017

Revised Date: 21 February 2018

Accepted Date: 27 February 2018

Please cite this article as: Haider, C.M.R., Iqbal, A., Rahman, A.H., Rahman, M.S., An ensemble learning based approach for impression fraud detection in mobile advertising, *Journal of Network and Computer Applications* (2018), doi: 10.1016/j.jnca.2018.02.021.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

An Ensemble Learning Based Approach for Impression Fraud Detection in Mobile Advertising

Ch. Md. Rakin Haider[a,1], Anindya Iqbal[a,1], Atif Hasan Rahman[a,1,], M Sohel Rahman[a,1,*]

[a]*Department of Computer Science And Engineering*
Bangladesh University of Engineering and Technology
ECE Building, West Palasi, Dhaka-1205

Abstract

Mobile advertising enjoys 51% share of the whole digital market nowadays. The advertising ecosystem faces a major threat from ad frauds caused by false display requests or clicks, generated by malicious codes, bot-nets, click-firms etc. Around 30% revenue is being wasted due to frauds. Ad frauds in web advertising have been studied extensively, however frauds in mobile advertising have received little attention. Studies have been conducted to detect fraudulent *clicks* in web and mobile advertisement. However, detection of individual fraudulent display in mobile advertising is yet to be explored to the best of our knowledge. We have proposed an ensemble based method to classify each individual ad display, also called an *impression*, as fraudulent or non-fraudulent. Our solution achieves as high as 99.32% accuracy, 96.29% precision and 84.75% recall using real datasets from an European commercial ad server. We have proposed some new features and analyzed their contribution using standard techniques. We have also designed a new mechanism to offer flexibility of tolerance to different ad servers in deciding whether an ad display is fraudulent or not.

*Corresponding Author
Email addresses: rakinhaider@cse.buet.ac.bd (Ch. Md. Rakin Haider), anindya@cse.buet.ac.bd (Anindya Iqbal), atif.bd@gmail.com (Atif Hasan Rahman), msrahman@cse.buet.ac.bd (M Sohel Rahman)

دریافت فوری ← متن کامل مقاله

ISIArticles
مرجع مقالات تخصصی ایران

✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
✓ امکان دانلود نسخه ترجمه شده مقالات
✓ پذیرش سفارش ترجمه تخصصی
✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
✓ دانلود فوری مقاله پس از پرداخت آنلاین
✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات