TargetAd 2016: Int'l Workshop on Ad Targeting at Scale

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ABSTRACT

The 2nd International Workshop on Ad Targeting at Scale will be held in San Francisco, California, USA on February 22nd, 2016, co-located with the 9th ACM International Conference on Web Search and Data Mining (WSDM). The main objective of the workshop is to address the challenges of ad targeting in web-scale settings. The workshop brings together interdisciplinary researchers in computational advertising, recommender systems, personalization, and related areas, to share, exchange, learn, and develop preliminary results, new concepts, ideas, principles, and methodologies on applying data mining technologies to ad targeting. We have constructed an exciting program of eight refereed papers and several invited talks that will help us better understand the future of ad targeting.

Keywords

Computational advertising, Ad targeting, Audience modeling

1. INTRODUCTION

Personalization of online content has become an important feature for many internet services. It has been defined as "the ability to proactively tailor products and product purchasing experiences to tastes of individual consumers based upon their personal and preference information" [1], which may lead to improved user experience and directly translate into financial gains for online businesses [2]. In addition, personalization fosters stronger bond between users and companies, and can help in increasing user loyalty and retention [3]. For these reasons it has been recognized as an important strategic goal of major internet companies [4, 5], and is a focus of significant research efforts. Personalized content has already become an integral part of many popular online services, a trend likely to continue in the future.

We consider content personalization from the viewpoint of targeted advertising [6], an increasingly important aspect of online businesses. In recent years, targeted advertising has become one of the largest and most lucrative advertising channels. Despite the fact that traditional offline advertising still accounts for the majority of overall advertising expenditures [13], future potential of this burgeoning field is clearly exemplified by reported ad revenue of over 49 billion dollars in 2014 in the US alone, combined with a remarkable growth of around 20% on a yearly basis [12]. The size and importance of the online advertising, as well as the interesting open questions that the scale and variety of the targeting tasks bring, has drawn attention of many researchers from both industry and academia, resulting in a number of novel methods, improvements, and workshops dedicated to the flourishing field [7, 8, 9]. In order to maintain and improve upon this positive trend, researchers in academia and industry alike are faced with numerous algorithmic, theoretical, and practical challenges that need immediate attention. This was one of the main motivating factors that prompted us to organize the TargetAd workshop.

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2. OBJECTIVE

The objective of the workshop is to bring together interdisciplinary practitioners and researchers from both industrial and academic research labs in order to discuss the state-of-the-art research, as well as future directions in the field of ad targeting in the era of Big Data. We expect the workshop to foster and grow stronger a community of researchers interested in this diverse area, and yield future collaborations and exchanges.

3. TOPICS OF INTEREST

Due to a large diversity of the internet medium, targeted advertising has evolved to encompass many different outlets for the advertisers interested in reaching their target audiences. These include behavioral targeting [9, 14] (where users are targeted based on their general browsing behavior), sponsored search advertising [11, 16] (where ads are targeted towards issued search queries), advertising in social networks [10], e-mail retargeting [15] (targeting users based on their e-mail interaction patterns), site retargeting, video advertising, and app install advertising, to name a few.

The TargetAd workshop provides a forum for researchers from all these areas to share information, challenges, and latest results from latest investigations into this diverse set of applications. The topics of the workshop include, but are not limited to the following:

- Machine learning-based ad targeting;
- Ad targeting in social networks;
- Ad targeting on mobile devices;
- Recommender systems;
- Pay-per-install targeting strategies;
- Machine learning in sponsored search;
- Contextual advertising;
- Large-scale user modeling for ad targeting;

- Data-driven methods for interest targeting;
- Privacy-preserving targeting;
- Behavioral targeting;
- Post-conversion feature attribution;
- Click-conversion modeling in display advertising;
- Machine learning for bidding strategies;
- Content categorization for ad targeting;
- Experience with deployed systems.

4. ORGANIZERS

The TargetAd workshop is organized by a team of researchers with several years of industry experience in the ad targeting field, and builds upon successful event previously organized at the 24^{th} International World Wide Web Conference (WWW 2015). The list of the organizers is presented below:

- Mihajlo Grbovic (Yahoo Labs, USA);
- Nemanja Djuric (Yahoo Labs, USA);
- Vladan Radosavljevic (Yahoo Labs, USA).

5. WORKSHOP PROGRAM

The program will be presented in form of a half-day workshop, with several invited talks from the leading researchers. The list of confirmed speakers includes Shuang Yang, AI and Data Science Lead at Operator, who will talk about large-scale ad targeting and mobile advertising at Operator, and other leaders in the domain.

Additionally, after reviewing a number of high-quality submissions, the PC members have accepted eight research papers on a diverse set of topics, including video advertising, anomaly detection in ad platforms, preserving privacy in advertising, app-install predictions, location-based advertising, personalized search in e-commerce, and novel forms of user representations for ad targeting. The full list of paper is given bellow:

- Bowen Zhou and Shahriar Shariat (Turn Inc.), "Finding Needle in a Million Metrics: Anomaly Detection in a Large-scale Computational Advertising Platform";
- Yukihiro Tagami, Hayato Kobayashi, Shingo Ono, and Akira Tajima (Yahoo Japan), "Distributed Representations of Web Browsing Sequences for Ad Targeting";
- Ratko Orlandic (Yahoo Inc.), "Sponsored Video Advertising: Filling the Void between Online and TV Advertising";
- Chih-Ya Shen (Research Center for Information Technology Innovation, Academia Sinica) et al., "On Spatial-Aware Viral Marketing for Location-based Advertisements";
- Ian Nathan Anggono (University of New South Wales), Hamed Haddadi (Queen Mary University of London), and Mohamed Ali Kaafar (Data61), "Preserving Privacy in Geo-Targeted Advertising";
- Zhen Xia, Musen Wen, Liang Wang, Qiang Ma, Datong Chen, and Peiji Chen (Yahoo Inc.), "Building a Bi-directed Recommendation System for Mobile Users and App-install Ad Campaigns";
- Brendan Kitts (PrecisionDemand), Garrett Badeau (Adap.tv), Davood Shamsi (AOL Platforms), and Rob Luenberger (AOL Platforms), "Demographic Prediction of Web Requests from Labeled Aggregate Data";
- Yi-An Chen (Yahoo Taiwan) et al., "Toward Personalized Product Search for eCommerce Sites: A Case Study in Yahoo! Taiwan".

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