

# Ads Selection At Twitter

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## ABSTRACT

Online advertising is a multi-billion dollar industry and it also serves as the major revenue source for Twitter Inc. In this talk, we present the ads selection pipeline at Twitter, using Promoted Tweets in Home Timelines as an example. The pipeline starts from targeting, where we model Twitter users' attributes offline, e.g. user gender, age, interest etc, so that we can match them with advertisers' specified audience criteria. The second critical component is user engagement rate prediction, where we employ a large-scale online learning system to do real-time training and prediction with rich features. Lastly, we run a second price auction based on the predictions, advertisers' bids and some other optimization parameters. We will present a series of case studies drawn from recent experiments in the setting of the deployed system used at Twitter.

## Categories and Subject Descriptors

H.4.m [Information Systems Applications]: Miscellaneous

## General Terms

Algorithms.

## Keywords

Online advertising; computational advertising; social media; ads targeting; ads click-through prediction; ads selection

## SHORT BIO



Yue Lu is the lead of Ads Prediction team at Twitter. The team have been building large-scale machine learning models and systems to predict different user engagements (e.g., tweet expansion, link clicks, follows, conversions) on different types of Twitter ads (e.g., promoted tweet, promoted accounts). Yue received her PhD at University of Illinois at Urbana-Champaign and joined Twitter in 2011.

She is author of more than 20 publications and 5 patents, received more than 900 citations across the world. She also served on various program committees at leading conferences, including: International Conference on the World Wide Web (WWW 2015, 2014, 2013, 2011), ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2015, 2014, 2013), International AAAI Conference ON Web and Soial Media (ICWSM 2014), Very Large Data Bases (VLDB 2013), ACM International Conference on Information and Knowledge Management (CIKM 2013), Empirical Methods on Natural Language Processing (EMNLP 2013), Association for Computational Linguistics (ACL 2013), International Joint Conference on Natural Language Processing (IJCNLP 2013), etc.