March 03, 2017

Method For Using Photos As Contextual Information For Ad Targeting

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Recommended Citation
Hampson, Courtney and Sanio, Jason, "Method For Using Photos As Contextual Information For Ad Targeting", Technical Disclosure Commons, (March 03, 2017)
http://www.tdcommons.org/dpubs_series/410

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METHOD FOR USING PHOTOS AS CONTEXTUAL INFORMATION FOR AD TARGETING

ABSTRACT

A system and method are disclosed for identifying items, objects, and activities in photos taken by a user, of a user, or shared with a user to target ads. The method works as follows. The user takes photos relating to an interest (interest-1) that he stores in photo library. If a user visits a website relating to another interest (interest-2), and if the website shows ads, the website visit triggers an ad auction. For targeting ads, the system accesses the user’s contextual information relating to interest-2, and additionally the photo library for other interests, identifying interest-1 from the photo library. In the ad auction, the system scores ads based on relation to interest-2, or both interest-2 and interest-1 to determine priority. Finally, the system shows relevant ads based on highest priority. The method increases relevancy and quality of ads to the user without direct input from the user.

BACKGROUND

User’s habit and buying preferences often materialize in the real world, and are not exclusively digital. In the case of ad targeting, there is a limited scope to understand what the user cares about and likes (typically based on the sites they visit, content they read, etc.). This misses out on key contextual information for things happening in users’ lives offline. For some types of questions, a user’s first instinct is not to do a search about it. For example, when looking for a new kind of dog food, one might ask a vet or friends who have pets rather than doing a web search. By taking contextual information from a user's photo library (which may depict the most important things in a user's life), ads could be better targeted to the appropriate user.

DESCRIPTION
This disclosure presents a system and method for identifying items, objects, and activities in photos taken by a user, of a user, or shared with a user to target ads, as illustrated in FIG. 1. The system uses this information as input for contextual targeting on the display network. As shown in FIG. 1, in step A, the user takes photos relating to a first interest (interest-1) that he or she stores in photo library. When a user visits a website relating to another interest (interest-2) in step B, and if the website shows ads, the visit triggers an ad auction (step C). For targeting ads, the system accesses the user’s contextual information relating to interest-2, and additionally the photo library for other interests, identifying interest-1 (step D) from the photo library. In the ad auction (step-E), the system scores ads based on relation to interest-2, or both interest-2 and interest-1 to determine priority. Finally, the system shows relevant ads based on highest priority (step F).

FIG. 1: Method for using photos as contextual information for ad targeting

An example workflow of the process is presented below:
1. User takes many pictures of their pet dog which are automatically uploaded to their Google Photos library.

2. User visits a running website with ads.

3. This user's visit triggers an ad auction to occur for the 3 ad spots on that website.

4. As part of the ad auction, the system identifies contextual information about that user, including the data the system determined from the user's photo library that they are a dog owner.

5. Ads enter the auction that both target dog owners and runners. There's an additional multiplier added to any running-related ads that are dog-related which increases the contextual relevancy score.

6. The user sees three ads on the website, one for a new pair of running shoes, one for a new leash for their dog and a third for a book titled "Running with your Dog: how to train your dog to run with you."

Conversely, we may see that a user takes multiple photos of themselves and friends running (and on runs) so the invention is able to determine that the user is a runner. When that user visits a website about taking care of their dog, we can use the invention in a similar, but inverse way, to show ads for running and dogs based on the photos context (running) and website context (dogs).

The method disclosed here takes into account offline activity to inform ad targeting online. It thus has the advantage of not requiring a user to explicitly take any actions to indicate interest in a product or topic. It further opens an additional subset of ads for a user to increase the competition in the ad auction. It increases relevancy and quality of ads to the user without direct input from the user. Advertisers are thus better able to segment their ads based on more refined targeting criteria for higher response rates.