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Automatic generation of affiliate links

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ABSTRACT

Online publishers that create new content are dissatisfied with currently available advertising formats, e.g., due to a belief that some current advertising formats spoil customer experience or drive customers away from their websites. This disclosure uses a single script within an online publisher website to automatically insert affiliate links within the publisher's content. Upon execution, these script sends a request an online advertising provider. Page content is analyzed using machine learning techniques to identify entities that refer to products. The identified products are matched with products available for sale from an online vendor and corresponding links are provided to the user browser for automatic insertion into the page content. The script can also enable user to click on the link to add the products to a shopping cart that is overlaid on the content of the publisher web page.

KEYWORDS

- affiliate marketing

- affiliate links

- online advertising

- online retail

- sponsored content

BACKGROUND

Some online publishers that create new content are dissatisfied with currently available advertising formats that are provided by advertising technology providers. For example, some publishers may believe that some current advertising formats, e.g., traditional banner, page grabbers, screen shift, etc. spoil customer experience on the publisher property (e.g., website) or

drive customers away from their websites. To drive revenue, some publishers work directly with advertisers to create sponsored or promoted content, instead of traditional online advertisements from advertising networks.

Affiliate marketing links are an alternative to traditional online advertising formats. Affiliate links enable online publishers to monetize reader purchases of products referenced in the publisher's content. When a reader clicks an affiliate link and purchases a product, the publisher that provides the affiliate link receives a commission. However, the creation of affiliate links is tedious, time consuming, and not scalable. For example, publishers need to work with different advertisers to generate corresponding affiliate links. Further, each affiliate link needs verification, e.g., confirmation that the linked products are actually offered for sale by the linked website.

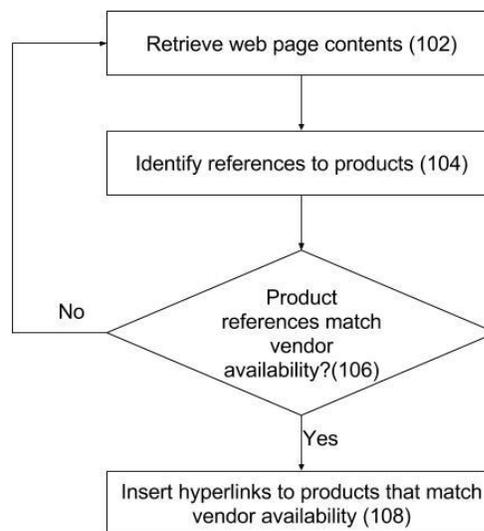DESCRIPTION

Fig. 1: Automatic generation of affiliate links

This disclosure makes advantageous use of machine learning techniques to automate creation of affiliate links on a publisher property, e.g., a publisher website. With permission of

the publisher, content provided by the publisher is analyzed, and attributable links to products available from vendors are inserted directly in the publisher's website.

Fig. 1 illustrates an example technique to generate automatic affiliate links. The techniques are implemented with permission from the publisher. Publishers can choose to select a subset of their website for insertion of affiliate links. Portions of the publisher website that are excluded are not analyzed. Affiliate links are inserted only within the permitted subset of the publisher website.

The contents of a publisher web page are retrieved (102). Machine learning techniques are applied to entities with the publisher's content, e.g., to identify references to products (104) that are present in the contents of the publisher web page. When the identified product references match products available from vendor partners (106), hyperlinks to the vendor partner page for the products are inserted into the web page contents (108). If the identified products are not available for purchase from a vendor partner, e.g., an online retailer, no affiliate links are inserted. As the publisher content changes over time, such updates are recognized and corresponding product references are updated.

The techniques enable publishers to automate the generation of affiliate links. Further, the techniques eliminate the need for a publisher to work individually with different advertisers. For example, this is especially useful when the publisher promotes products that are sold by different vendors in different geographic regions. This improves the revenue opportunity for the publisher since the automated affiliate links direct users to different vendors based on geographic region.
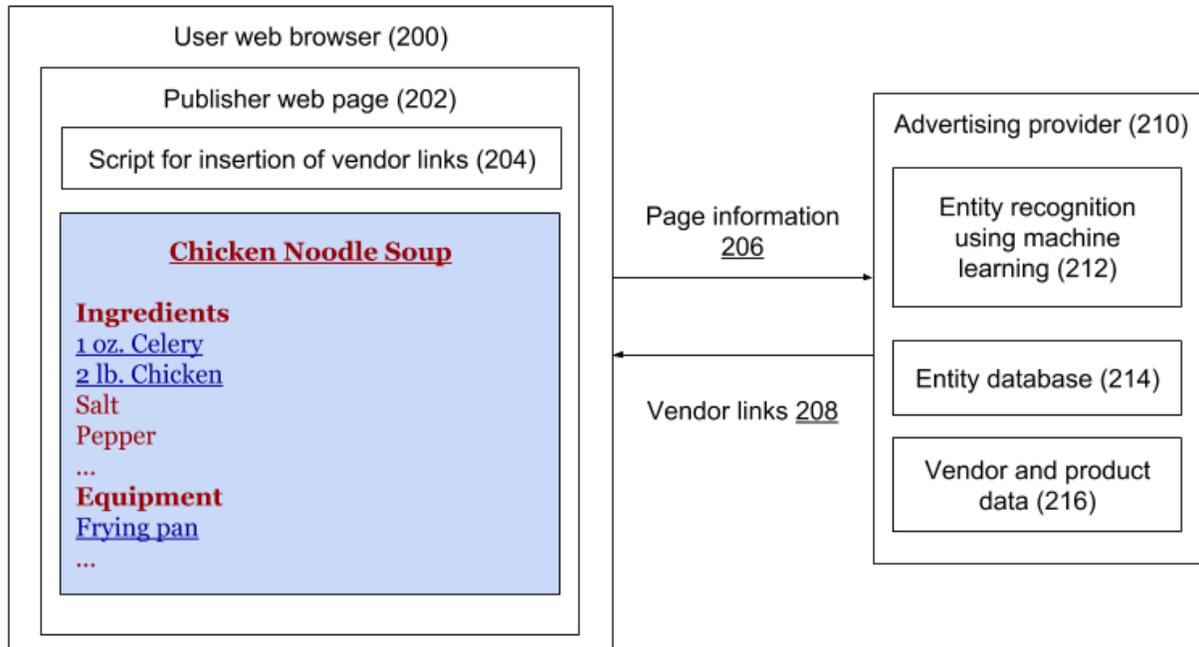
Fig. 2: Automatic insertion of affiliate links with single script

Fig. 2 illustrates automatic insertion of affiliate links into publisher content using a single script. The online publisher includes a single script (or script tag) in a web page (202). When a user loads the publisher web page using a browser (200), the script makes a request (206) to an advertising provider (210). The request includes page information of the publisher web page.

The advertising provider performs entity recognition using machine learning techniques (212) and matches the recognized entities with a database of entities (214) to identify products that are referenced in the page, or that readers of the article may find of interest to purchase. For example, such products can include ingredients on a webpage that includes a recipe, video games on a game review website, etc. The identified products are matched with products that are available for sale from vendors (216). Links to the vendor products (208) are returned to the client browser. The script turns the references to the recognized products in the publisher content into affiliate links. An affiliate link URL can include the web address to the product site, and

additional information, e.g., on the source of the click. Such information can be used for analytics. When a user clicks on such links and makes a purchase, the purchase is attributed to the online publisher and the publisher is rewarded.

In some instances, when publishers enable such technology, the script can support generation of a shopping cart in the website. For example, such techniques are suitable when a publisher website lists low value items. When a user clicks on a product link, the product is added to a shopping cart, e.g., overlaid on the publisher content. The user can add more products or check out from within the publisher website.

The one script solution is advantageous. For example, it enables the script provider, e.g., an advertising network, to stop the script automatically on websites that serve inadmissible content. Further, the script requires minimum involvement from the publisher. With this technique, publishers do not need to update, e.g., re-tag their website, as more products are added by vendors. The script automatically updates affiliate links each time the page is rendered. Further, online publishers can add semantic tags within their web page content, e.g., to indicate specific parts of the content that represent a product that may be for sale. An alternative technique is to perform the content analysis on a server or within a content management system (CMS), instead of using a client script.

Affiliate links can be inserted based on different criteria. For example, one criterion may be based on a current date. The word "Christmas jumpers" in publisher content may be used for an affiliate link during winter, but not for the rest of the year. Another criterion may be based on the response that the affiliate links receive. For example, if it is determined that links on words such as "milk" or "salt" are never clicked or clicked infrequently, these words are excluded from

the creation of affiliate links. Thus, not all words on a publisher website that are related to products are matched with a product.

Example

In the example shown in Fig. 2, the publisher website includes a how-to guide for making chicken noodle soup. The page content includes a list of ingredients, equipment suggested for the recipe, and step-by-step instructions. A script within the publisher website provides the page content to for analysis. Machine learning models trained to identify references to products are applied to the page content. In this example, the recipe includes references to various ingredients, e.g., "Celery," "chicken,"; and to equipment, e.g., "a frying pan." These are detected and matched to products available for purchase. Links to the respective vendor for the identified entities are returned to the script which turns corresponding content of the publisher website into links, as shown by the hyperlinks in Fig. 2. When the user clicks on the links and makes a purchase from the vendor partners, the publisher is rewarded.

Further to the descriptions above, a user may be provided with controls allowing the user to make an election as to both if and when systems, programs or features described herein may enable collection of user information (e.g., information about a user's social network, social actions or activities, profession, a user's preferences, or a user's current location), and if the user is sent content or communications from a server. In addition, certain data may be treated in one or more ways before it is stored or used, so that personally identifiable information is removed. For example, a user's identity may be treated so that no personally identifiable information can be determined for the user, or a user's geographic location may be generalized where location information is obtained (such as to a city, ZIP code, or state level), so that a particular location of

a user cannot be determined. Thus, the user may have control over what information is collected about the user, how that information is used, and what information is provided to the user.

CONCLUSION

This disclosure uses a single script within an online publisher website to automatically insert affiliate links within the publisher's content. Upon execution, this script sends a request to an online advertising provider. Page content is analyzed using machine learning techniques to identify entities that refer to products. The identified products are matched with products available for sale from an online vendor and corresponding links are provided to the user browser for automatic insertion into the page content. The script can also enable user to click on the link to add the products to a shopping cart that is overlaid on the content of the publisher web page.