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Ads For Minimal-Detour Spontaneous Shopping

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ADS FOR MINIMAL-DETOUR SPONTANEOUS SHOPPING

Abstract

A method and system of generating ads for small, local merchants plans a spontaneous, location-based shopping trip with minimal detours for a user by combining data based on the user's location, search/query history, and inventory of small merchants within proximity of the user that offer the desired products.

Keywords

Shopping plan, shopping suggestions, shopping itinerary, inventory management, day shopping plan.

Description

Local shops that are accessible for a potential customer as far as location and proximity are not always discoverable by the potential customer. Conventional on-line shopping focuses on global scale shopping with larger, national or international merchants, such that local, smaller merchants are at a disadvantage. It is difficult to determine when a local shop ad is more powerful or has reached more potential customers than an ad for a global-scale shop with a larger selection.

The system and method uses a machine-learning model, which combines data from a user's real-time coordinates between days and across other users. A predictive, deep learning model is then built, which may predict the user's presence in a specific location during the next 24 hours, for example, or during peak shopping hours, for example, predicting the location of the user on the following Saturday. Users' search query logs and historical data of the user are used

to build a virtual predicted shopping cart. Inventory data of the local merchant, information about special occasions, sales or mass events is combined with routing knowledge, traffic jams, accidents, and public transportation delays, for example. Based on this combined data, a shopping trip with minimal detours is provided to the user on his mobile device. The method and system facilitates the opportunity for local shopping by demonstrating how the user may obtain the easiest access to the items and products in which the users have indicated an interest. Small, local shops, including specialty shops in very small towns, are provided access via the ads to target potential customers with a greater precision. Thus, the method and system connect small specialty shops with new client bases.

Data is gathered about the user/customer, such as search history, analyzing what products or services the user has searched for, which ads the user has clicked on in the past, and using a deep learning model taking into consideration all data from the user as well as positional data of the user, a predictive virtual shopping cart is formed that predicts what products might be selected in the future by the user. Further source data used to form a predictive virtual shopping cart could also include weather forecast, past behavior of not only the user/customer but also a reference group associated with the user with regard to seasonal/week-day correlated and other cyclical behavior, and scheduled school holidays or personal calendar entries. The originally proposed shopping plan may be generated based on the user's individual history that is gathered by the user's device. It is also contemplated that a backend server is used to provide data on the user's history and preferences. The small, local merchant may provide a promotion, ads, and/or specialty description of its goods or services, and this information is combined with the current location/position of the user. If the user is within a predetermined location range of the merchant, an ad, offer, or coupon may be sent to the user's device about an item for which they are looking

that is available at that local merchant site.

The ad, offer, or coupon that is sent to the user from the local merchant ideally is based on an inventory analysis of the local merchant and can include an inventory management component in the form of software or point-of-service inventory checks that provide current inventory data to the ad generating system. Users could then be presented with an ad, coupon, or offer based on the analysis of the merchant's existing inventory. The user may be presented with an offer that is valid if the user visits the local merchant within a designated window of time.

The method and system allows a commercial bridge to be built between potential customers and small, local merchants by taking into consideration the following: 1) the location of the user; 2) the expected intent of the user; 3) whether the user is planning to make a purchase within an expected period of time; and 4) the inventory of the local merchant.

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│  Collect Shopper Individual History and      │
│  Location Data                               │
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│  Collect Merchant Inventory Data             │
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┌─────────────────────────────────────────────┐
│  Combine Shopper History and Location Data   │
│  with Inventory Data of Local Merchant to    │
│  form Predictive Virtual Shopping Car        │
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┌─────────────────────────────────────────────┐
│  Generate Ad, Coupon, Offer and Transmit     │──────▶ 📱
│  to User's Device                            │
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