The E-commerce Platform Customer Insights Analysis

Introduction

In this paper, I will analyze the behavior of the users through SQL followed the Data Analysis Cycle, which is Asking questions - Understanding data - Data Cleaning - Building Models - Data Visualization - Summary Suggestions;

Asking questions

1. According to the conversion indicators of e-commerce analysis, find out the conversion rate of each link to get unconverted goods and improve the conversion rate.

2. The user's behavior pattern analysis, like what time period for online shopping and other traffic indicators analysis.

3. Commodity analysis, what are the popular categories of goods, to find out the repurchase crowd and goods.

Understanding data

Data Source: Asiabill Back-end System Data

Field Meaning and Description

Field	Explanation
User ID	An integer, the serialized ID that represents a user
Item ID	An integer, the serialized ID that represents an item
Category ID	An integer, the serialized ID that represents the category which the corresponding item belongs to
Behavior type	A string, enum-type from ('pv', 'buy', 'cart', 'fav')
Timestamp	An integer, the timestamp of the behavior

Note that the dataset contains 4 different types of behaviors, they are

Behavior	Explanation
pv	Page view of an item's detail page, equivalent to an item click
buy	Purchase an item
cart	Add an item to shopping cart
fav	Favor an item

Dimensions of the dataset are

Dimension	Number
# of users	987,994
# of items	4,162,024
# of categories	9,439
# of interactions	100,150,807

Data Cleaning

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Building Models

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Summary Suggestions

Conclusions

1, the data set is located in the time area, the daily traffic is relatively stable, but from 12/1 onwards, the daily traffic has a significant upward trend due to the influence of activities and other factors. During different hours of the day, the number of clicks steadily increased from 19:00, peaked at 22:00, dropped slightly at 23:00, and dropped significantly at 24:00. Users use Taobao in the evening for browsing, and use Taobao during the day for buying with a stronger purpose.

2, user behavior including click, put in the shopping cart, collection and purchase, user conversion funnel collection accounted for 6.17% of clicks, relatively low, which is related to the large number of invalid clicks. The actual purchase accounts for 2.27% of the clicks, with a low conversion rate, which can further optimize the design of the purchase page. The conversion rate of independent users from clicks to final purchase is about 68.9%, and the highest number of repurchases among independent users is 72.

3. It is suitable to recommend products in the fourth quadrant category to users in the evening to increase the space for users to select and compare; it is suitable to recommend products in the second quadrant category to users during the day to stimulate purchase and improve the efficiency of placing orders. For the other two types of products, it is appropriate to optimize the recommendation of high-quality burst nature of the product, so that users can find the desired order target as soon as possible.

4. For this time zone, the proportion of users to be developed and to be recalled is large, so pay attention to optimizing user experience and paying attention to competitor behavior to deeply develop users and reduce user churn.

Suggestions

1. you can do precision marketing in the evening, using the evening active peak period, increase certain subsidies to enhance the strength of business promotions to improve customer referral rate to feed the customer acquisition rate. More activities, such as grabbing red packets, full reductions, etc.. Stimulate customers' desire to buy, and thus improve the transaction rate.

2. Improve pushing accuracy and pushing better quality products to reduce the number of invalid clicks. Optimize the filtering function of the e-commerce platform and increase the accuracy of keywords so that users can find the right products more easily. Provide customers with the function of comparing similar products, so that users do not need to return to the search results repeatedly, so that users can determine the products they want.

3. Use RFM model to stratify customers, to serve different levels of customers with thousands of operations to achieve the overall best customer marketing. For customers with high repurchase rates, you can summarize their portraits and preferences based on browsing and

shopping behavior, predict their preferences and push them, such as the most concerned product categories and types, and push them to users regularly after the new. For customers who do not buy and buy less, we should continuously optimize their portrait and preferences, predict their preferences and push and timely adjustment to improve the purchase rate and other indicators.

4. For repeat users to give certain preferences, you can stimulate repeat purchases with coupons and other methods, and try to issue them during the time of high user traffic. Increase the number of times users open the software to further improve user stickiness and increase the repurchase rate. You can take the mode of signing up to receive points, coupons, etc., so that users enter the mall every day.