Customer Attraction and Retention------Ads

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1. Questions

We studied the performance of advertisement TicketMaster.com are using and provided recommendations on how TicketMaster.com can attract and retain customers through advertisement. For customer attraction, we studied the impact of investment in Google search ads on customer clicks. Purchase behavior by different device users was further studied to provide insights on the effectiveness of Google search ads. For customer retainment, we are interested in providing an artist network through which TicketMaster can recommend similar artist to existing customers to create customer stickiness.

2. Tools

a. Customer Attraction

i. Linear regression

    Based on the adwords data set, we built a multivariate linear regression model with customers' total clicks as the dependent variable, and factors that may have influence on the clicks, which is max_cpc, impressions, avg_position, quality_score, firstpage_cpc and firstposition_cpc, as independent variables, thereby determining their relationship. We diagnosed the model to make sure it's reasonable.

ii. t-Test

    Based on the adwords and user behaviour data sets, we classified device types as mobile and pc, calculated average click-conversion rate and ratio of users choosing mobile for each unique adgroup_id, and divided into nonmobile and mobile groups with the ratio less or bigger than 0.5. Then using t-test to see the relationship between device choice and conversion clicks.

b. Customer Retainment

i. Network

    Considered two artists as a pair and counted the number that they are both searched by a unique user. Using Gephi to plot the network graph.

3. Results

a. Customer Attraction

- Firstpage_cpc and firstposition_cpc have negative coefficient
- Quality_score has relatively big coefficient
- R square is 56.98%
- The points in the residual plot are randomly dispersed around the horizontal
- Mean of click rate for mobile group is 4.46, for nonmobile group is 5.83

b. Customer Retainment

- Obtain artists networks

4. Business Recommendations

a. Customer Attraction

- Because of the negativeness of coefficient, investment in those ads that have relatively bigger estimate bid in order to show up on higher position can be relatively small
- Improving quality of advertisements is important for increasing sales
- Increasing apps or changing web on mobile device to attract more customers as   mobile devices play more important role in life

b. Customer Retainment

- For each user, push ads relatively highly related to his or her visited artists according to the artists networks